

Private v. Public Subsidies:  
An Analysis of Chapter 774 Subsidies For The Production of  
Low and Moderate Income Rental Housing

by

David Searson Carter

Bachelor of Science  
Bates College  
1982

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE  
MASTER OF SCIENCE IN REAL ESTATE DEVELOPMENT AT THE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEPTEMBER, 1988

© David Searson Carter 1988

The author hereby grants to M.I.T.  
permission to reproduce and to distribute publicly copies  
of this thesis document in whole or in part.

Signature of the Author\_\_\_\_\_

David Searson Carter  
Department of  
Architecture  
August 8, 1988

Certified by\_\_\_\_\_

Michael Wheeler  
Visiting Professor of Urban Studies and Planning  
Thesis Supervisor

Accepted by\_\_\_\_\_

Michael Wheeler  
Chairman  
Interdepartmental Degree Program in Real Estate Development



Room 14-0551  
77 Massachusetts Avenue  
Cambridge, MA 02139  
Ph: 617.253.2800  
Email: [docs@mit.edu](mailto:docs@mit.edu)  
<http://libraries.mit.edu/docs>

## **DISCLAIMER OF QUALITY**

Due to the condition of the original material, there are unavoidable flaws in this reproduction. We have made every effort possible to provide you with the best copy available. If you are dissatisfied with this product and find it unusable, please contact Document Services as soon as possible.

Thank you.

**The Appendix section of this thesis contains text that is illegible.**

Private v. Public Subsidies:  
An Analysis of Chapter 774 Subsidies For The Production of  
Low and Moderate Income Rental Housing

by

David Searson Carter

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE  
MASTER OF SCIENCE IN REAL ESTATE DEVELOPMENT AT THE  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

ABSTRACT

Massachusetts "anti-snob zoning law" - Chapter 774 - allows qualifying developers of affordable housing to overcome local regulating barriers by expediting the permitting process and over-riding exclusionary zoning. As presently interpreted, the law applies only to developers receiving a "state or federal subsidy."

This study questions the appropriateness of that requirement. It introduces the concept of a private subsidy as a possible alternative to the state and federal programs. A financial analysis of the subsidy programs that currently qualify under Chapter 774 to create low and moderate income rental housing is used to determine the "economic value" of each. The programs are compared and contrasted to a private subsidy alternative through a discounted cash flow method of analysis.

The results of the study indicate that a private subsidy would, under certain conditions, be a valuable addition to the current programs.

## TABLE OF CONTENTS

CHAPTER 1 -----	4
INTRODUCTION	
Chapter 774; An Overview	
CHAPTER 2 -----	9
Chapter 774; Standards and Process	
CHAPTER 3 -----	16
STATE HOUSING ASSISTANCE FOR RENTAL PRODUCTION	
Outline of (SHARP) Program	
SHARP Point System	
SHARP Analysis	
CHAPTER 4 -----	29
TAX EXEMPT LOCAL LOANS TO ENCOURAGE RENTAL HOUSING	
Outline of (TELLER) Program	
TELLER Analysis	
CHAPTER 5 -----	32
LOW INCOME HOUSING TAX CREDIT	
Outline of (TRA '86) Tax Credit Program	
Selection Criteria	
TRA '86 Analysis	
CHAPTER 6 -----	38
PRIVATE SUBSIDY PROGRAM - (Outline)	
Qualifying Criteria	
Private Subsidy Analysis	
CHAPTER 7 -----	45
COMPARATIVE ANALYSIS	
Summary	
Conclusion	
BIBLIOGRAPHY -----	59
APPENDIX -----	61



## CHAPTER 1 - INTRODUCTION

In 1969, the Commonwealth of Massachusetts established Chapter 774 of the Massachusetts General Laws to encourage the production of low and moderate income housing by offering incentives to developers. The primary incentive is a "comprehensive" permitting process which enables eligible developers to submit a single application to build low and moderate income housing.<sup>1</sup> This process yields two important benefits: 1) developers are allowed to by-pass virtually all local boards, thus expediting the approval process; 2) developers are sometimes able to disregard local zoning ordinances which exclude higher densities - densities typically required to produce low and moderate income housing.

The passage of Chapter 774 represents one state's legislative attempt to implement other governmental incentives for increasing the stock of low and moderate income housing. Specifically, it was aimed at limiting the power of local zoning authorities to thwart housing production. Though a national goal of establishing "a decent home and a suitable environment

---

<sup>1</sup> Chapter 774 is now Chapter 40B, sec. 20-23 of the Massachusetts General Laws.

for every American family"<sup>2</sup> had been set forth in the Federal Housing Act of 1949, twenty years before the passage of Chapter 774, the country and the commonwealth had not come close to achieving this fundamental objective.

Local zoning and related land use regulations had increasingly been invoked to block the siting of affordable housing. The United States Supreme Court upheld the constitutionality of zoning in Village of Euclid v. Ambler Realty Company, 272 U.S. 365 (1926), and thereby gave local communities significant power in controlling growth and restricting the use of private property. Much of the impact of Euclid was positive - it fostered planning and predictability - but, because land use control was exercised locally, the case also prompted a parochialism in cities and towns. Specifically, municipalities would ban land uses seen as costly or socially undesirable (most notably, low and moderate income housing), even though they were clearly needed on a regional level. Affordable housing became a NIMBY (not-in-my-backyard) problem.

As a consequence, constitutional and statutory challenges to exclusionary zoning have been brought in the courts of New Jersey and other states. For example, in Southern Burlington

---

<sup>2</sup> Report of the U.S. National Advisory commission of Civil Disorders (Washington, D.C.: U.S. Government Printing Office, 1968) usually referred to as the Kerner Report, p. 467.

(1975), the New Jersey Supreme Court held that:

a developing municipality may not, by a system of land use regulation, make it physically and economically impossible to provide low and moderate income housing in the municipality for various categories of persons who need and want it.

The court ordered Mount Laurel (and by implication all other New Jersey municipalities) to provide and create expanded housing opportunities. Unfortunately, implementation of this principle has proven slow and sometimes contradictory.<sup>3</sup>

In Massachusetts the attack on snob-zoning has been largely legislative. Chapter 774 represents a significant intrusion into traditional local autonomy by allowing developers to build low and moderate income housing using a comprehensive permit.<sup>4</sup> Upon enactment, Chapter 774 was recognized as an innovative legislative breakthrough at the state level and throughout the years has served as an impetus for the production of low and moderate income housing. Since 1978 state authorities have sustained denials by local ZBA's in only seven of the one hundred fifty six cases appealed. These

---

<sup>3</sup> Michael Wheeler, "Resolving Local Regulatory Disputes and Building Consensus for Affordable Housing," M.I.T. Housing Policy Project. Working Paper #9, 1988.

<sup>4</sup> In theory, Chapter 774 is only binding in Massachusetts communities that have not reached a designated level of low and moderate income housing, but very few had met the standard.

statistics are a clear indication of the impact of the law.<sup>5</sup>

Even so, many developers and housing advocates argue that a major facet of the program, the required use of government subsidies, limits its effectiveness. By statute, the comprehensive permitting process can only be invoked by developers of "subsidized" low and moderate income housing. That is, unless developers apply for and receive a recognized state or federal subsidy, they cannot avail themselves of the comprehensive permitting process and zoning over-ride. Without getting approval for greater densities, the developers, in turn, cannot produce less costly housing.

Though the use of subsidies was intended to insure affordability, critics allege this is not always the case. Specifically, they contend that the administrative cost of applying for governmental programs actually chew up much of the economic benefit they are supposed to provide. These critics argue that if they were spared this delay, private financing could actually increase the production of low and moderate income housing.

This paper evaluates three major programs which satisfy the subsidy requirement under Chapter 774:

---

<sup>5</sup> Cynthia Lacasse, "The Anti-Snob Zoning Law: The Effectiveness of Chapter 774 in Getting Affordable Housing Built," M.I.T. 1982.

- \* State Housing Assistance for Rental Production program (SHARP)
- \* Tax-Exempt Local Loans to Encourage Rental housing (TELLER)
- \* Low Income Tax Credit program (TRA '86)

Specifically, it examines the net economic value of these programs and compares the value offered in each program to a private subsidizing alternative presently available in the market place. Each program is evaluated with respect to its effectiveness in achieving the goal of creating low and moderate income housing. Perhaps most important, the analysis demonstrates the feasibility of developing low and moderate income housing without state or federal subsidies.

## CHAPTER 2 - 774 STANDARDS AND PROCESS

Under Chapter 774's comprehensive permitting process developers apply to the local zoning board of appeals (ZBA) for a single permit which encompasses all necessary sub-division approvals. Developers by-pass other local boards including the planning board, conservation commission, and board of health.<sup>6</sup> An "over-ride" clause written into Chapter 774 allows the State to reverse adverse ZBA rulings which the state deems unjustified and/or exclusionary.

Chapter 774 specifies a timetable for the approval process. The ZBA must hold a hearing within thirty days after receiving a completed application for a comprehensive permit. The ZBA must render a decision within forty days after the hearings are closed. If the application is either denied or approved under conditions rendering the project "uneconomic" (as defined in Chapter 774), the applicant may appeal the decision to the State Housing Appeals Committee (HAC) within twenty days. The HAC must hold the initial hearing within twenty days. The HAC must then render a decision within

---

<sup>6</sup> However, conservation commission approval is required pursuant to the State Wetlands Act if applicable; and a building permit is required subsequent to comprehensive permit approval.

thirty days after its last hearing.<sup>7</sup>

An applicant filing for a comprehensive permit under Chapter 774 must meet four basic criteria; namely,

- 1) The developer must be "qualified." A qualified developer is defined under Chapter 774 as a non-profit developer, a public agency, or a limited dividend corporation (as defined by the particular subsidizing agency involved).
- 2) The development must include low or moderate income housing. The definition of low or moderate income housing and the minimum quantities required are similarly defined by the particular subsidizing agency involved.
- 3) The applicant must have some form of site control over the property for which the comprehensive permit is being requested.
- 4) The applicant must have a letter of intent from a qualified federal or state agency indicating potential eligibility for subsidized funding.<sup>8</sup>

---

<sup>7</sup> Chapter 774 fails to provide specific limits with respect to the cumulative time span of ZBA and HAC hearings; consequently, the permitting time table is not absolutely finite.

<sup>8</sup> Massachusetts Housing Partnership "Questions and Answers about the Comprehensive Permit Process" prepared by Stockard and Engler, Inc.

It must be emphasized that the first and second provisions give the subsidizing agencies a much larger role than simply providing funds. Specifically, they guarantee that the project really will advance State housing policy.

Developers meeting each of the above criteria must provide the following additional information as part of the comprehensive permit application.

- 1) Primary site development plans showing the locations and outlines of proposed buildings.
- 2) A report of existing site conditions including street elevations, traffic patterns, and buildings.
- 3) Preliminary architectural drawings including floor plans, elevations, and sections.
- 4) A list of proposed building types including the size of units, number of bedrooms, floor areas, parking availabilities, and open spaces.
- 5) A preliminary sub-division plan where the sub-division of land is involved.
- 6) A preliminary utilities plan including sewage, water, and drainage conditions.
- 7) A list of requested exceptions to local codes and ordinances including zoning by-laws.<sup>9</sup>

---

<sup>9</sup> Ibid.



A qualified developer then submits this information to the local ZBA for their consideration under the comprehensive permit process. The ZBA may deny a permit for a project which would have serious adverse impacts on the health and safety of the community. Otherwise, the ZBA is compelled by Chapter 774 to approve the application. The ZBA may approve the project subject to reasonable conditions concerning the physical and economic characteristics of the project.

If the project is denied by the local ZBA, or is approved with conditions that render the project "uneconomic," the developer may appeal the decision to the Commonwealth's HAC. Any developer seeking an appeal must comply with the following three Geographic Allocating Standards.

- 1) The application must be made in a city or town with an existing low or moderate income housing stock of less than 10%.<sup>10</sup>
- 2) The total amount of land currently occupied by low or moderate income housing in the subject community must comprise less than 1.5% of the total land in the community zoned for residential, commercial, and industrial use, (excluding publicly owned land).

---

<sup>10</sup> Of the 351 municipalities in the Commonwealth, 23 currently exceed the 10% requirement with an additional 39 in the 7% - 10% range.

- 3) The total land area in the community being developed as low and moderate income housing, in the current year, must be less than .3% of the total land area in the community or 10 acres, whichever is larger.<sup>11</sup>

A qualified developer who complies with these three standards may appeal either a denial or a conditional approval that renders the project "uneconomic." The HAC was established as a mechanism within Chapter 774 to regulate and oversee the decisions of the local ZBAs in regard to applications for comprehensive permits. The HAC is comprised of a five-member board. The Governor appoints one city counselor and one town selectman, the remaining three members (including the Chairman of the HAC) are appointed by the Commissioner of the Massachusetts Department of Community Affairs.

Chapter 774 defines low or moderate income housing as:

Any housing unit subsidized by the Federal or State Government under any program to assist the construction of low or moderate income housing as defined in the applicable Federal or State Statute, whether built or operated by any public agency or any nonprofit or limited dividend organization.

The State Attorney General, in an advisory non-binding opinion, has concluded from this language that a project must have a

---

<sup>11</sup> Metropolitan Area Planning Commission "Chapter 774: An Interpretive Analysis for Cities and Towns" (Boston: Metropolitan Area Planning Commission, 1969), p. 4

state or federal subsidy to qualify under Chapter 774. Accordingly, private subsidies structured to buy-down the cost of low and moderate income units will not qualify a project for a comprehensive permit. To date, this opinion has not been challenged or interpreted in court.

The Attorney General's interpretation of "subsidized" has influenced the HAC to require developers to demonstrate a qualification for federal or state subsidies to an agency which provides subsidies for the construction or substantial rehabilitation of low or moderate income housing. Since 1969, several federal programs administered by the Department of Housing and Urban Development qualified as a subsidy under Chapter 774. But now, with the exception of the Federal Low Income Housing Tax Credit program (TRA '86), the federal programs have been discontinued. The Commonwealth has filled this void by recently implementing three programs which qualify as sources of subsidy. These programs include: Homeownership Opportunity Program (HOP), Tax Exempt Local Loans to Encourage Rental Housing (TELLER), and State Housing Assistance For Rental Housing (SHARP). This paper will focus on the Commonwealth's SHARP and TELLER programs, along with the TRA '86 program, as each deals exclusively with rental housing. The HOP program, on the other hand, is designed to facilitate homeownership, and thus is not really comparable.

Developers who qualify for subsidies are categorized as either non-profit, public agency, and limited dividend developers. This paper deals exclusively with the private-sector limited dividend developer. It must be understood that the limited dividend developer expects an appropriate return on investment. This analysis, therefore, assumes that limited dividend developers are motivated primarily by appropriate, if not excessive, returns on investment, all other things being equal. (By contrast, a non-profit or public agency developers may have broader, non-financial objectives.)

This paper will begin with an introduction to the three rental subsidy programs currently in existence followed by a hypothetical private subsidy alternative. The financial analysis in each chapter will then be compared and contrasted in the chapter to follow.

### CHAPTER 3 - STATE HOUSING ASSISTANCE FOR RENTAL PRODUCTION

State Housing Assistance for Rental Production (SHARP) was signed into law in December of 1983 to stimulate the development of rental housing in the Commonwealth. The program is designed to "encourage types of housing development which the private sector could not accomplish without some form of government aid".<sup>12</sup>

Under the SHARP program, the Massachusetts Housing Finance Agency (MHFA) provides construction and permanent financing through the sale of tax-exempt or taxable bonds. The most recent tax-exempt bond issue was sold at 8.5%. In addition, the SHARP program provides an annual cash subsidy to cover projected operating shortfalls. These so-called "SHARP funds" are provided by the Executive Office of Communities and Development (EOCD) and accrue interest at 5%. It is important to note that SHARP funds are loans, not grants, and as such, must be repaid. Most SHARP loans are set up on a maximum fifteen year time frame, after which the loan is either repaid, or in some cases, renewed to continue the project as low or moderate income housing.

---

<sup>12</sup> Executive Office of Communities and Development "Program Guidelines, State Housing Assistance for Rental Production (SHARP). July 1987, p 1.

The intent of the SHARP program is to provide the "minimum amount of subsidy necessary" to sustain the project as economically feasible; that is, cover all operating expenses and debt service. Fundamental to the viability of the program is the theory that as market rents rise and debt service remains constant (over time), the required SHARP subsidies decrease, and ultimately, are repaid out of project cash flow. However, the SHARP subsidy:

shall not exceed in any one year , on a per unit basis, the difference between the amount determined by EOCD to be necessary to pay debt service on a typical, newly constructed rental housing project at prevailing interest rates on bonds whose interest is tax exempt from federal or state taxation, and the amount necessary to pay such service at 5% per annum.<sup>13</sup>

All SHARP developments must have a minimum of 25% of the units set aside in perpetuity for low-income households. The low-income units, in most cases, will be marketed to households holding Section 8 or Chapter 707 rental assistance certificates.

SHARP currently allows a 6% return on the developer's "equity", where equity is defined as the sum of the following three categories:

1. A developer's fee of 20% of project cost exclusive of land allowance (appraised value of the land) plus

---

<sup>13</sup> Ibid p. 4-5.

developer's overhead of 5% of project costs exclusive of land allowance.

2. A "standard" cash investment at closing, expected to approximate 2% of the mortgage amount. Although not explicitly stated in the program guidelines, any additional cash investment by the developer is also eligible to receive a 6% return, if attainable. For example, if the developer were to pay cash for the land, this cash investment would be counted as equity, for purposes of calculating the developer's permitted annual 6% dividend.

3. A construction letter of credit of 4%, which rolls over into an operating period letter of credit. For the purpose of the analysis to follow, this 4% letter of credit is assumed to cost 1% of the total letter of credit.<sup>14</sup>

SHARP funds are awarded in two ways. First, through MHFA competitions developers compete for a limited pool of funds. Projects are awarded funds on the basis of: 1) a review against minimum standards; 2) A merit-based point system (covered in the following pages); and 3) the total amount of available funding.

Secondly, SHARP funds are awarded through the Massachusetts Housing Partnership (MHP). The MHP awards SHARP funds to proposals which have the support of the Local

---

<sup>14</sup> Ibid p. 3-4.

Partnership. Local Partnerships are established throughout the Commonwealth by MHP as a way of encouraging low and moderate income housing development. Projects submitted to MHP for consideration must also meet the minimum standards estimated within the merit-based point system discussed below.

## **SHARP POINT SYSTEM**

SHARP proposals are evaluated on a point system based on a maximum of 130 points. Points are earned through the following three categories:

- 1) Development Quality Goals- This category has a total of 50 possible points. There are five sub-categories each of which carries 10 points. Applicants must score a total of 30 points in this category and receive a minimum of 4 points in each sub-category. The five sub-categories are:
  - A) Design- The overall quality of the design is evaluated.
  - B) Development Team- The track record of the development team is evaluated.
  - C) Site- The suitability of the site, availability of utilities, zoning, and site control are evaluated.
  - D) Management- The quality of the management plan is evaluated.
  - E) Marketability- The feasibility of the proposed rent



schedule is taken into account.

2) Overall Impact Goals- There are a total of 50 points in this category allocated between four sub-categories:

A) Housing Needs- (10 points) The proposed project is evaluated on the merits of the degree to which it meets the local housing needs; for example, the need for three bedroom units v. two bedroom units. Standards for this category vary somewhat by location.

B) Community Impact- (15 points) Projects with positive community impacts are more favorably reviewed.

C) Affirmative Action- (10 points) The degree of housing and job opportunities for minorities is ranked in this section.

E) Readiness to Construct- (15 points) Consideration will be given to those proposals that are ready to move quickly to construction.

3) Affordability-Value- There is a maximum of 30 points in this category. While the affordability value ranking takes into account three criteria, the points are not separately allocated to each but rather cumulated as indicated below:

A) The Unit Point Count- The unit point count is derived based on the following table;

<u>TYPE OF UNIT</u>	<u>NUMBER OF POINTS</u>
Low-income with a minimum of 25% in perpetuity	10 points
Low-income, 30 year term	8 points
Low-income, 15 year term	6 points
Moderate-income, 30 year term	5 points
Moderate-income, 15 year term	3 points
Market rental, 15 year term	2 points
Market rental, 7.5 year term	1 point

B) The Bedroom Adjustment Factor- To encourage larger unit size, an adjustment factor has been derived. The number of units in each category is multiplied by the appropriate adjustment factor to calculate the corresponding points. The adjustment factor table is as follows;

<u>SIZE OF UNIT</u>	<u>ADJUSTMENT FACTOR</u>
0 to 1 bedroom-----	0.60
2 bedrooms-----	1.00
3 bedrooms-----	1.40
4 bedrooms-----	1.70

C) The Assessment of Cost to the Commonwealth- This is determined based on the initial SHARP amount requested.<sup>15</sup>

## SHARP ANALYSIS

For purposes of financial analysis across all subsidy programs, a hypothetical 100-unit housing development is used. The project is located on a twenty acre tract of land located in MetroWest. According to current zoning, the tract can accommodate forty one-half (1/2) acre lots. Under Chapter 774, the developer is seeking approval for 100 residential units. The applicable percentage of low income units in the SHARP section is set at 25%, or 25 units. The remaining 75 units are assumed to be rented as market-rate units. Land acquisition is assumed to be \$1,600,000, or \$16,000 per unit. Hard costs total

---

<sup>15</sup> Ibid p. 10-15.

\$6,432,500 (approximately \$59 per sq.ft.), of which \$500,000 allocated to in land development. Operating assumptions with respect to rental income per unit type, laundry income, replacement reserve, and operating expenses are held constant and are listed in the first table of each section of analysis.

This project has been evaluated under four different SHARP financing alternatives:

1. The first alternative assumes the use of tax exempt financing at a rate of 8.5%, as per the most recent MHFA bond issue. For complete analysis, see SHARP-4A (Appendix A).
2. The second alternative assumes the use of taxable financing at a rate of 10%. For complete analysis, see SHARP-4B (Appendix B).
3. The third alternative assumes the use of tax exempt financing at a rate of 8.5% combined with a low income tax credit of 4%. For complete analysis, see SHARP-4C (Appendix C).
4. The fourth alternative assumes 10% taxable financing combined with a 9% low income tax credit. For complete analysis, see SHARP-4D (Appendix D).

A discount rate of 17.5% has been used, representing the minimum after-tax return-on-equity expected by developers of multi-unit housing projects (see discussion below). Finally, a

holding period of ten years has been used, as it is considered the industry standard for financial analysis of income properties. The methodology employed to evaluate each alternative is the discounted cash flow (DCF) methodology. This methodology permits alternatives to be compared to each other and to other subsidy programs as well. Theoretically, the DCF methodology is considered to be the most appropriate technique because it enables developers to quantify the differences in value among various programs which are characterized by unique flows of investment costs and benefits over time. That is, DCF addresses the fundamental investment principle of the time value of money. DCF is currently used by numerous sophisticated developers and investors in the real estate industry. The results of the analysis of the four SHARP alternatives are summarized in the table below:

<u>SEE APPENDIX</u>	<u>PROGRAM DESCRIPTION</u>	<u>FINANCIAL VALUE (NPV)</u>
D	SHARP - With a market rate loan and a 9% tax credit.	523,000
C	SHARP - With tax-exempt financing and a 4% tax credit.	349,000
A	SHARP - With tax-exempt financing without a tax credit.	82,000
B	SHARP - Market rate financing without tax credits.	(83,000)

The NPV associated with each of the four variations of the SHARP program is indicative of its "financial value." For example, a profit maximizing limited dividend developer (as defined by SHARP) would require \$267,000 (\$349,000-\$82,000) in present value terms at the onset of a development to be induced to forgo the 4% tax credit that could supplement a tax-exempt loan under the SHARP guidelines. This assumes no additional time is associated with securing the tax credit. While isolated comparisons can be drawn between this and other project scenarios, the analysis in this report is only accurate for our hypothetical (yet realistic) 100-unit development proposal.

A close examination of the financial sensitivity analysis of the SHARP development proposals illustrates their hypersensitivity to assumed Revenue Growth Factors. Specifically, a

five percent (5%) Revenue Growth Factor for the subsidized units is used as per the maximum allowance set fourth in the SHARP Guidelines. A Revenue Growth Factor of six percent (6%) is used for the market rate units. The sensitivity of this variable is illustrated in each appendix for the respective subsidy program. The chart which analyzes this sensitivity is entitled, "Sensitivity Analysis: Effects on After-Tax NPV due to Changes in Revenue Growth and Unit Land Cost Assumptions. For example, the average NPV, assuming a \$16,000 unit land cost and a 5% revenue growth rate for market rate units, is \$258,000; yet using a 3% growth rate, the NPV falls to \$-254,000. This represents a difference of \$512,000, which is arguably significant. Aggressive assumptions regarding the growth rate of the market rate units can make the profitability (which affects the amount of SHARP funds applied for) of a development proposal appear greater than is actually attainable. Until some standardization is set for the growth rate of market rate units, applications to the SHARP program may fall victim to over-aggressive growth rate assumptions - assumptions which may induce MHFA to fund unrealistically aggressive projects which may require additional (unanticipated) funding in the future.

It's clear that over-aggressive assumptions concerning market growth rates are extending the risk horizon for the state. One criticism of the SHARP program that should be

raised is the definition of limited dividend developer. The SHARP program allows a developer to earn a 6% return on equity, where equity includes a developers fee of 20% and a developers overhead of 5% of project costs (exclusive of land). The developers fee and overhead are "gimmicks" used to raise a developer's permitted annual cash distribution to a level consistent with non-subsidized programs. An example may help.

Assume that a developer can produce a unit of rental housing for a total cost of \$100 (this includes "hard" and "soft" costs exclusive of land). Under SHARP, a limited dividend developer is credited with earning and investing back into the project a hypothetical development fee equal to 20% of total project cost, or \$20. Furthermore, at the developer's election, the developer can be credited with earning and investing an additional 5% overhead fee (\$5), if such overhead costs are not withdrawn from the development upon funding of the permanent mortgage. Therefore, under SHARP, a limited dividend developer would be allowed to have \$25 of "phantom" equity in the project. Under the 6% limited dividend restriction, the developer would be entitled to a maximum \$1.50 cash dividend per year.

Unfortunately, the creation of "phantom" equity, in turn, creates "phantom" regulation. Specifically, because SHARP developments typically employ less than 10% (\$10) cash equity,



even the developer who is willing to invest \$10 of cash into the \$100 project is, at a minimum, permitted to receive a 15% ( $\$1.50/\$10$ ) annual dividend on the cash investment. It should be noted that SHARP developments are largely debt financed. From a policy perspective, this means that the limited dividend "gimmick" is usually not even a binding constraint on developers.

However, even if the actual amount of cash equity in a SHARP project is increased, the developer's fee and overhead will remain constant. This relationship has a diminishing effect on the developer's Return on Equity (ROE) as the actual amount of equity in a project is increased. Consequently, this limited dividend "gimmick" induces developers to limit equity in a project to the minimum level which will score points on the "affordability index" ; leaving the balance of the project to be publicly financed through SHARP subsidies. The result is an arguably inefficient allocation of public funds, as limited subsidies are drained into over-funded projects.

## CHAPTER 4 - TAX EXEMPT LOCAL LOANS TO ENCOURAGE RENTAL HOUSING

Tax Exempt Local Loans to Encourage Rental Housing (TELLER) was created in 1984 as a way to encourage low income rental housing at the local level. Under this program, local housing authorities have the option of issuing (with EOCD approval) tax-exempt bonds to finance low and moderate income housing projects in their community. Pursuant to the Massachusetts Constitution and section 26(m) of the General Laws, projects financed by TELLER tax-exempt bonds must have a portion of the units reserved for low income households.<sup>16</sup> There are two programs through which the project can meet this criteria:

- 1) The development may set aside 20% of the units as low income units. Under this program, the units must be made available to households earning less than 50% of the area median income.
- 2) The development may choose to set aside 40% of the units in the development as low income units. Under this program, the units must be made available to households earning less than 60% of the area median income.

---

<sup>16</sup> Executive Office of Communities and Development, "Tax Exempt Local Loans to Encourage Rental Housing, TELLER Program", Department of Community Affairs, 1985.

In either case, the units must be rented to low income households for a minimum "lock-in" period of fifteen years. The actual amount of the subsidy to the developer depends on the attractiveness of the tax-exempt bond financing relative to taxable financing alternatives.

## TELLER ANALYSIS

Under the TELLER program, limited dividend developers are limited to a 10% return on equity. Equity, under this program, is defined as the difference between the amount of the loan awarded to the project and the total cost of the project.

The TELLER program is evaluated using the hypothetical 100 unit project described in Chapter 2. TELLER financing is based on the latest bond issue of 8.5% and is separated into the following two categories:

1. Tax-exempt TELLER financing at 8.5%. Appendix E.
2. Tax-exempt TELLER financing with a 4% low income tax credit. Appendix F.

In both TELLER scenarios, 20% of the units have been assumed to be affordable. The financial analyses in Appendix E and F reflect the limited dividends and unit mix as required

under the Teller program. The financial value (NPV) of the of the two TELLER scenarios are shown below:

<u>SEE APPENDIX</u>	<u>PROGRAM DESCRIPTION</u>	<u>FINANCIAL VALUE (NPV)</u>
F	TELLER - With a 4% tax credit.	709,000
E	TELLER - Without tax credit.	488,000

Sensitivity analysis indicates that the TELLER program is also hyper-sensitive to market rate growth rate assumptions. At a land cost of \$16,000 per unit, the TELLER alternative with a 4% tax credit and a 5% growth rate produces an NPV of \$355,000 - about half that when a 6% revenue growth rate is used for the market units. The financial value of this TELLER alternative drops drastically to -\$276,000 when a growth rate of 3% for the market rate units is assumed.

## CHAPTER 5 - LOW INCOME HOUSING TAX CREDIT

Although TRA '86 removed most of the income-sheltering potential formerly used to induce low-income housing development (e.g., accelerated depreciation and deductions for construction period interest and taxes), it did establish the Low Income Tax Credit for the construction, rehabilitation, and acquisition of low income housing. The new tax credits are broken out into three categories. First, a credit of 9% per year for 10 years is available for projects that involve the construction or rehabilitation of qualifying low income units. Second, a 4% credit is available for projects using tax exempt bonds or other federal subsidies to finance the construction or rehabilitation of low income units. Finally, a credit of 4% is available for the acquisition of existing low income units.

The credits may be received by the owners of qualified low income units on a straight line basis for ten years, but the project must remain low-income for a period of fifteen years. To calculate the dollar amount of credit for each year, the credit percentage is multiplied by the "qualified basis" of the "qualified" low income units. A 9% credit received over ten years will have a present value (at 5%) equal to 70% of the owner's "qualified basis" on "qualified" low income units. The

4% credit will have a present value (at 5%) equal to 30% of qualified basis. Credit percentages are adjusted monthly by the Treasury, to maintain the 70% and 30% present values, respectively.

States are allocated low-income tax credits equal to \$1.25 per resident. This limit applies to credits used in conjunction with "taxable" financing, as opposed to projects using tax-exempt bond financing. Much of the excitement surrounding this program is based on its sheer magnitude. Based on a national population of 250 million, the annual credit for the country could be as high as \$312.5 million.<sup>17</sup> Based on the current population in Massachusetts, the credit would amount to \$7,277,500 per year.<sup>18</sup>

All projects, tax-exempt as well as "taxable", applying for low income tax credits must meet the following three criteria:

1) The project must meet one of the following two resident targeting criteria:

a) At least 20% of the rental units in the project must be rented to households with incomes no higher than 50%

---

<sup>17</sup> Richard S. Goldstein and Charles L. Edson, The Tax Credit for Low Income Housing, Real Estate Review, Spring 1987 pp 54.

<sup>18</sup> Low Income Housing Tax Credit Guidelines, Executive Office of Communities and Development, 1988.

of the area median income; or

b) At least 40% of the rental units in the project must be rented to households with incomes no higher than 60% of the area median income.

2) The "rent restricted" units must set the gross rents no higher than 30% of the relevant income limitations cited above.

3) The project must be retained as rental housing for a minimum of fifteen years or the credit will be pro-rated proportionally.<sup>19</sup>

#### SELECTION CRITERIA

Pursuant to TRA '86, Governor Dukakis signed Executive Order No. 271 on February 12, 1987 assigning the administrative duties of the low income tax credit program to the EOCD. With this assignment, EOCD set up a list of criteria for those projects subject to the tax credit allocation; that is, any project not using tax exempt bond financing or federal subsidies.

First, the projects must meet the following set of five "threshold criteria":

1) The project must demonstrate financial feasibility and the

---

<sup>19</sup> Ibid. p. 2

ability to receive firm financial commitments within 60 days of receiving of a tax credit commitment. Projects are then expected to close financing within 90 days of receiving the tax credit commitment.

2) The development team must demonstrate the ability to complete the project as proposed.

3) The project must be ready to move to construction.

4) The project must fit within the goals of the tax credit program and the housing goals of the Commonwealth.

5) The project must help meet the Commonwealth's Affirmative Action goals by providing housing and job opportunities to minorities.<sup>20</sup>

Projects which meet these "threshold criteria" are permitted to move to the next stage of "competitive criteria." Projects are allocated tax credits based on a point system associated with the competitive criteria. There are a total of 100 possible points allocated as follows:

A) Housing Need. This category has a total of 40 points allocated to three separate sub-categories.

1) The degree to which the tax credit will leverage the maximum benefit in terms of creation of additional low income and affordable units. This sub-category has a total of 20 possible points.

2) The degree to which the low income units will meet

---

<sup>20</sup> Ibid. p. 6



the needs of the community and the region. This sub-category has a total of 10 points.

3) The degree to which the entire project (both low income and market rate units) will meet the needs of the community and region. This sub-category has a total of 5 points.

4) The readiness to move to construction. This sub-category has a total of 5 points.

B) Impact. This category has a total of 30 points which are allocated through three sub-categories.

1) The positive impact that the project will have on the community in which it is located. This sub-category has a total of 15 points.

2) The degree to which the project diverts the need to allocate other state resources. This sub-category has a total of 10 points.

3) The degree to which the project will broaden opportunities for minorities. This sub-category has a total of 5 points.

C) Quality. This category has a total of 30 possible points allocated equally to three sub-categories.

1) The qualifications of the development team for a total of 10 possible points.

2) The quality and suitability of the site for a total of 10 possible points.

3) The quality of the design, manageability, compatibility for a total of 10 possible points.<sup>21</sup>

#### TRA '86 ANALYSIS

Again, the hypothetical 100-unit development is used in this analysis. Under this scenario, a 9% low-income tax credit and a market interest rate of 10% are assumed. See Appendix G.

This scenario shows a financial value equal to \$558,000 at the standard market unit growth rate assumption of 6%. This value drops to \$249,000 at 5% and -\$236,000 at a growth rate of 3% (for the market units). This proposal, like SHARP and TELLER, is hyper-sensitive to market unit revenue growth rate assumptions.

---

<sup>21</sup> Ibid. p. 6-7.

## CHAPTER 6 - PRIVATE SUBSIDY PROPOSAL

Although the TELLER, SHARP, and TRA '86 Tax Credit programs differ in many regards, they do have important similarities. Specifically, the approval process for each program considers not only the dollars and cents of the required subsidy, but also weighs design, density, affirmative action objectives, readiness to construct, and the geographic allocation of proposed projects throughout the state. These ancillary factors have become a central focus of the subsidizing agencies. Consequently, from a development perspective the subsidizing agencies wield significant power. For example, rather than defining "limited dividend developer", Chapter 774 provides that:

Determination whether an applicant for a comprehensive permit to construct low or moderate income housing qualifies as a limited dividend organization,..., is properly left to the appropriate state or federal agency from which applicant is required to obtain funding.

This provides the subsidizing agency a strong role in determining the fate of developer applicants. Absent the subsidizing agency, the process would lack assurances that development proposals would serve their intended purpose.

If, in fact, a private subsidy program could efficiently finance low and moderate income housing, an effective review

process would still be necessary to monitor the performance and consistency of the developments. If this review were not required, developers could use a comprehensive permit to build projects injurious to the public good. Accordingly, some type of policing mechanism is needed regardless of the method of financing used to subsidize the low and moderate income units. Any private subsidy program which ignored these ancillary considerations would clearly be unacceptable, and inconsistent with the central focus of Chapter 774.

Even if the problems of monitoring developments can be solved, the requirement to use state or federal subsidies remains. Eliminating the required use of public subsidies could be achieved through three mechanisms. First, at the State judicial level, a decision could be sought in favor of a private subsidy program. Second, legislation could be passed changing this requirement. Finally, a "token subsidy" program could be designed which works within the present confines of the law. The development of a token subsidy program appears to be the most efficient approach when compared to the judicial and legislative alternatives.

I propose a system by which a modest fund would be organized to provide a token subsidy for privately financed low and moderate income housing developments.

## QUALIFYING CRITERIA FOR PRIVATE SUBSIDY PROGRAM

I suggest the MHFA administer this new program. Since MHFA presently issues site approval letters as an initial step in the subsidy granting process in SHARP, it has the necessary background, and organization. The additional process time needed to obtain a state-funded subsidy would be eliminated. Also, the level of project review (at least with respect to financial feasibility) could be understandably lessened because no state funds would be at risk.

Prior to awarding a site approval letter, MHFA would evaluate the project based on the following set of criteria:

1. Quality of the Development - The site plan and architecture would be evaluated to insure that it is in keeping with local community character and standards.
2. Development Team - The development team would be required to demonstrate its ability to: 1) raise 10% of the total development cost as cash equity; and 2) exhibit the financial strength necessary to qualify for financing for the balance of the project. This ability would be demonstrated by a letter of commitment from a lending institution. The development team would also be

required to have secured a threshold participation on the part of minorities of perhaps 10%.

3. Affordability - The project would be required to match the affordability guidelines of at least one other existing qualified subsidizing agency. This would include minimum percentages of affordable units as well as income and rent level criteria.

4. Tenant Selection - All developments would be required to offer a minimum of 20% of the low income units in the project to qualified minorities. In the event that the project is under-subscribed by such minorities, the units may then be offered to other needy individuals.

In view of the fact that projects pending approval before the local ZBA are counted toward the threshold level of low and moderate income housing in a community, care would be exercised when issuing site approval letters. Clearly if developers failed to initiate approved projects, the process (and program) would be damaged. To insure the construction of approved projects, applicants would be required to post a performance bond equal to five percent of total estimated project costs.

The site approval letter issued by MHFA would be used in the following manner. If the project requires the assistance of public funds, the letter would be used in its current capacity

as a pre-requisite to programs such as SHARP. However, if the project was financially feasible through private subsidy, the letter could be used to acquire a one dollar token subsidy from MHFA. This token subsidy would effectively qualify the development as "subsidized" by a state agency.<sup>22</sup> The site approval letter could then be used to comply with Chapter 774, and be presented to the local ZBA to establish eligibility for comprehensive permit consideration.

An important practical advantage of the private subsidy program is it that it effectively increases the amount of funding available for low and moderate income housing. By decreasing the time element needed to secure subsidy approval, the opportunity cost to developers would be proportionally reduced and privately financed low-income housing developments could, in fact, be financially feasible. Moreover, by increasing the amount of private financing involved in the production of low and moderate income housing, the net effect would be to increase the leverage of current subsidy spending; that is, getting more housing bang for each subsidy buck.

The present agencies have limited resources to allocate

---

<sup>22</sup> Conceivably an aggrieved abutter could challenge such a practice, or a local ZBA could refuse to recognize the appropriateness of the application. Appeals to the court or the HAC might well be pursued. The fact that Chapter 774 was enacted to promote more affordable housing - not to promote subsidies for their own sake - would be strong evidence in support of the "token" subsidy program.

to qualified applicants, and this constrains the amount of low and moderate income housing units they can subsidize. During the last several years, these agencies have typically had more qualified proposals than the funds to subsidize them. Not only does the lack of funding limit the entire process, it also deters other qualified developers from participating.

With the implementation of a private subsidy program, the production of low and moderate income housing would no longer be capped by the public funds available. Depending on market conditions , the private subsidy program could significantly increase the rate of production of affordable housing. Of course, local communities would and should likely attempt to control the direction of development. One proactive response by local communities might be to market municipally-owned parcels viewed as commensurate with this type of development, instead of waiting for alternative proposals which might be less desirable.

## **PRIVATE SUBSIDY ANALYSIS**

The cost of a private subsidy associated with the same 100 unit development used throughout this paper is illustrated in Appendix H.



Consistent with existing public subsidy programs, the private subsidy program dedicates 20% of the units to low and moderate income housing, and makes the same cost and unit revenue assumptions as the other programs. The major difference in this program is the absence of any limitation on the distribution of dividends. This program allows developers to draw down dividends as they become available. The private subsidy program, like the public subsidy programs, is very sensitive to variations in the revenue growth rate assumptions for the market rate units. For example, a change in the revenue growth rate to 3% (from 6%) translates into a reduction in project value of \$739,000.

## CHAPTER 7 - COMPARATIVE ANALYSIS <sup>23</sup>

This comparative analysis evaluates how much "financial value" a particular subsidy brings to the development, compared to the base line value of a private subsidy (stipulated to be zero). Each public subsidy program is evaluated in three ways: first, on the basis of its financial (net present) value; second, on the basis of breakeven time delay for subsidy financing approval; and third, on the basis of breakeven project density.

Using the DCF method discussed above, the net present value is calculated for each of the eight public subsidy alternatives. Private-sector developers soundly agree that projects of this type should yield an after-tax return on cash equity between 15% and 20%, depending on project-specific risks. As an average, I have chosen a uniform expected after-tax return of 17.5% for the purposes of calculating net present values. The results of the analysis are listed in the table on the following page.

---

<sup>23</sup> Many thanks are due to Tod McGrath for his time and patience in reviewing the financial analysis of this paper.

Table 7A - NPV RATING

<u>SEE APPENDIX</u>	<u>PROGRAM DESCRIPTION</u>	<u>NPV</u>
F	TELLER - With a 4% tax credit.	709,000
G	TRA '86 - Market rate loan with a 9% tax credit.	558,000
D	SHARP - With a market rate loan and a 9% tax credit.	523,000
E	TELLER - Without tax credit.	488,000
C	SHARP - With tax-exempt financing and a 4% tax credit.	349,000
A	SHARP - With tax-exempt financing without a tax credit.	82,000
H	Market Subsidy Deal - Market rate financing without tax credits.	0 (Baseline)
B	SHARP - Market rate financing without tax credits.	(83,000)

For example, this NPV Rating table shows that a developer using the SHARP program with tax-exempt financing without tax credits realizes a net present value of \$82,000 higher than the same development using a private subsidy.

Conversely, a developer using the SHARP program with taxable market rate financing and no tax credits has a net present value of \$83,000 less than the net present value achieved through market rate financing alone (the private subsidy program).

In each case, these results assume that the time necessary to obtain a given public subsidy is no greater than that required for a typical privately-financed housing development. In practice, of course, the approval process takes time, and time is money. The longer an applicant must wait for subsidy approval, the less that subsidy is worth. There comes a point - surprisingly soon - when the benefit of the subsidy is entirely offset by the cost of delay. After that, the subsidy arguably becomes a tax. Indeed, we are employing the DCF methodology which expressly addresses the time value of money from both a practical and policy perspective. We must also expressly address the money value of time.

In as much as time delays are a costly reality of these programs, the following analysis quantifies the respective subsidies in terms of delays. Using the private subsidy as a benchmark, breakeven time delays are calculated and expressed in terms of the additional time (in months) permissible before a public subsidy program loses its proforma value.

Developers and public administrators disagree about time

tables; but every case is the same. Rather than stipulate an average, I have calculated the declining value of each subsidy as approval time drags on.

The following analysis uses the private subsidy program as a benchmark. The time delays associated with each public subsidy program (shown in the chart below) are those breakeven number of months in which any further delays render the developer worse off than if the private subsidy was used. This analysis is based on the hypothetical 100-unit development scenario and is intended to illustrate the point at which the added value of each subsidy expires.

Table 7B - TIME DELAY

<u>GRAPH IN APPENDIX</u>	<u>PROGRAM DESCRIPTION</u>	<u>BREAKEVEN TIME DELAY IN MONTHS</u>
I	TELLER - With a 4% tax credit.	24+
J	TRA '86 - Market rate loan with a 9% tax credit.	22
K	SHARP - With a market rate loan and a 9% tax credit.	21
L	TELLER - Without tax a tax credit.	19
M	SHARP - With tax-exempt financing and a 4% tax credit.	14
N	SHARP - With tax-exempt financing without a tax credit.	3
	Market Subsidy Deal - Market rate financing without tax credits.	0 (BASE CASE)
P	SHARP - Market rate financing without tax credits.	NEGATIVE

(SEE ACCOMPANYING GRAPHS)

Assuming that a private subsidy would qualify under Chapter 774 for a comprehensive permit, the following conclusions can be drawn: a developer considering various financial alternatives at the commencement of a project (of the type assumed in this analysis) should estimate the time required to secure financing under each subsidy scenario. If the time estimated exceeds those listed in the Time Delay Chart above, the developer should prefer a private subsidy to a public one. For example, if a developer feels the expected time for approvals for the SHARP program with tax-exempt financing without tax credits is greater than 3 months, the program would end up costing more than the subsidy received. Although approval time tables are difficult to predict, a developer may forgo under certain market conditions potential additional profit and move to construction in a more familiar market, rather than waiting for further approvals and enduring additional market risk.

For policy makers and program administrators, the graphic illustration of declining value of subsidies is strong evidence of the importance of expediting the approval process. Dollars lost to delay profit no one. Expedited approvals would allow state agencies to leverage current investments and produce incentives for expanded development of affordable housing

without added expenditure.

An alternative method of analyzing subsidies is in terms of the actual product produced. Chapter 774 provides a mechanism through which developers receive increased density allowances in return for allocating some portion of the development to low or moderate income housing. This analysis also suggests how developers and policy makers can trade-off subsidy, not against approval time, but project density. A developer who anticipates a long delay for state approvals will be inclined to design a denser project to cover that cost. Ironically, that added density may exacerbate local opposition and delay. If the developer knew he could build promptly, he could afford to develop a less objectionable project.

The following analysis quantifies the value of the various subsidy programs in terms of breakeven acceptable densities, from the developer's perspective. Once again, the privately-subsidized "Market" deal is used as the base case, though in this instance, project densities vary. Assuming that the density approved under the comprehensive permit is equal to five units per acre, the analysis answers the question, "How many units per acre would a developer be willing to accept if a given subsidy were received without any additional time delays?" Clearly, if a subsidy program has value, the developer would be willing to accept fewer than five units per acre; that is, trade-



off time for density. (see table 7C below)

Table 7C - DENSITY TRADE-OFF

<u>GRAPH IN APPENDIX</u>	<u>PROGRAM DESCRIPTION</u>	<u>DENSITY IN UNITS/ACRE</u>
I	TELLER - With a 4% tax credit.	3.5
K	SHARP - With a market rate loan and a 9% tax credit.	3.5
J	TRA '86 - Market rate loan with a 9% tax credit.	3.75
L	TELLER - Without tax a tax credit.	3.75
M	SHARP - With tax-exempt financing and a 4% tax credit.	4
N	SHARP - With tax-exempt financing without a tax credit.	4.75
O	Market Subsidy Deal - Market rate financing without tax credits.	5 (Base Case)
P	SHARP - Market rate financing without tax credits.	5.5

(SEE ACCOMPANYING GRAPHS)

As the chart above indicates, small changes in density can translate into large differences in the bottom line. Because

private subsidies (in the form of density bonuses) have been demonstrated to be financially feasible; however, without the additional density achieved through the Chapter 774 process, private subsidies, as well as public subsidies, would not be effective.

## **SUMMARY**

As has been suggested throughout this paper, Chapter 774's requirement of a "subsidy" appears ironically to have constrained affordable housing. The "subsidy" game leads developers on an odyssey through various programs, each with a slightly different twist or rule. The object for the limited dividend developer is to choose a program which will best suit the needs of the project and ultimately render the highest return. In some cases, however, the developer may be wise to first consider which program will have funds at the time a particular project comes on line.

The objective, from the state's point of view, is to use the rules of the "game" to entice competent developers to participate. The dilemma for the state is that it needs to insure that Chapter 774 is used for its intended purpose, but by the same token, it should take care not to have certification ultimately increase housing costs.

Recommendation: 1) Categorize the programs according to depth of subsidy provided. Those projects requiring less subsidy should be approved in less time with less public scrutiny. A hierarchy of programs would ensure that projects requiring less subsidy participate in programs providing less. Projects requiring deeper public subsidy would submit to a more comprehensive program. 2) Recognize that projects requiring substantial investment of scarce state funds may have to be more competitively scrutinized than those not requiring state dollars.

The state subsidy game has created a local response known as the "Municipal Delay Game." This game pits local governments against developers. The timetable specified in Chapter 774 does not specify a time frame for public hearing review. Through the use time delays, communities not only try to defeat proposals, they also act to discourage future proposals. Unfortunately, the self-serving "Municipal Delay Game" tends to myopically focus municipalities on defensive, rather than offensive, strategy. Specifically, municipalities which play the delay game forego attractive opportunities to negotiate better designed and less offensive projects.

Developers, determined to secure approvals, pay ever-increasing "carrying costs" safe in the knowledge that state or

federal subsidies will ultimately render the project "economically" feasible.

Recommendation: Establish guidelines to be followed in the public hearing process. Don't allow projects to self-generate the need for deeper subsidies.

State and federal governments have fallen victim to useless regulatory gimmicks. Why is there a requirement for a state or federal subsidy, where it can be shown that a private subsidy program can successfully produce affordable housing? What is wrong with a private subsidy?

Recommendation: Local communities and developers, as well as the state government, have all expressed an interest in the future direction of affordable housing. I would recommend legislating a private subsidy program to produce affordable housing. This private subsidy program would be one of several concepts that could be used in a "three-way negotiation" between towns, developers, and the Commonwealth. Private subsidies, project densities, and project approval time-lines are a few of the issues that show "swap potential" in this type of setting. The concept of three-way negotiated settlements has been utilized in various forms and for various reasons in other parts of the country. For example, Will Fleissig, former Director of Downtown Development in Denver Colorado, coined

the term "negotiated settlement" in reference to the process by which he brought various parties including developers, neighbors, and elected officials together to interact on complex development issues.<sup>24</sup>

The "limited dividend" gimmick sets limits on the distribution of cash-flow. SHARP is perhaps the greatest offender of this. SHARP creates "phantom" equity for developers in an attempt to permit higher effective dividends on actual cash invested. In many SHARP developments, as this analysis demonstrates, the limited dividend restrictions are non-binding due to lack of available cash-flow.

Limited dividend restrictions induce developers to seek maximum, not minimum, state subsidies (in terms of development financing). Why? The answer is, cash equity is constrained to earn only a 6% or 10% annual dividend, depending on the program selected. For example, if a developer wished to finance a TELLER project with 100% cash equity, he or she would only be able to earn a 10% cash return on equity, despite superior performance of the project. Such a restriction would be unacceptable to most private sector developers. Therefore, if they are otherwise induced to participate in the TELLER program, they are inclined to borrow as much money as possible

---

<sup>24</sup> Wheeler, Michael, "Resolving Local Regulatory Disputes and Building Consensus for Affordable Housing", MIT 1988, p. 27

to limit financial restrictions on their limited supply of cash equity. The unfortunate consequences of this strategy are that public funds are inefficiently allocated and the resulting financial structure of the developments are considerably riskier than if a greater percentage of cash equity were employed. Effectively, excessive amounts of state funding is being channeled into needlessly risky projects.

Although the calculation of developer's equity for purposes of cash distribution limitations is different under the SHARP program, the same adverse financial consequences occur.

Recommendation: Focus on financial returns to actual cash invested and eliminate legislative fictions (limited dividend restrictions) which purportedly limit a developer's cash return, but which in fact do not, due to highly leveraged (risky) financial structures.

There are no guarantees that enough affordable housing will ever be built. However, a private subsidy program, which complements streamlined and efficient public subsidy programs will almost surely produce more affordable housing with less public expenditure than can be created under the current publicly-subsidized programs.

## CONCLUSION

The analysis presented in this paper, comparing the existing public subsidy programs with the implementation of private a subsidy alternative, shows that a properly structured private subsidy program could succeed. Though the proforma financial value of the private subsidy program is less than most of the existing public programs, the combined benefits of saving time and reducing market risk would likely induce private developers to choose this method, were it available. In most cases, as the time necessary to arrange subsidized financing approaches two years, the added value of the respective subsidies no longer exist. Also, by reducing the time required to secure financing through the use of a private subsidy, developers can potentially mitigate market risk. Finally, the analysis of public subsidy programs indicates that developers would be willing to swap density for timely approvals, if given the chance. This "swap potential" is significant in light of the typical local resistance to (fear of) higher density housing developments.

## BIBLIOGRAPHY

Chapter 774, Sections 20 to 23 of Chapter 40B sec. 20, Massachusetts General Laws.

Chapter 774: An Interpretive Analysis For Cities and Towns, Metropolitan Area Planning Commission, 1969.

Goldstein, Richard S., and Edson, Charles L., The Tax Credit For Low Income Housing, Real Estate Review, Spring, 1987.

Kerner Report, Report of The U.S. National Advisory Commission of Civil Disorders, (Washington, D.C.: U.S. Government Printing Office, 1968).

Lacasse, Cynthia, The Anti-Snob Zoning Law: The Effectiveness of Chapter 774 in Getting Affordable Housing Built, M.I.T. Masters Thesis, Department of Urban Studies and Planning, 1987.

Low Income Housing Tax Credit Guidelines, Executive Office of Communities and Development, 1988.

Program Guidelines, State Housing Assistance For Rental Production (SHARP), Executive Office of Communities and Development, 1987.

Questions and Answers About The Comprehensive Permit Process, Massachusetts Housing Partnership.

Southern Burlington County NAACP v. Township of Mt. Laurel, 67 N.J. 151, 336 A 2d 713 cert. denied, 423 U.S. 808 (1975); and Southern Burlington County NAACP v. Township of Mt. Laurel, 161 N.J. Super. 317, 391 A.2d 935 (Super. Ct., Law Div. 1978).

Tax Exempt Local Loans To Encourage Rental Housing, Massachusetts Executive Office of Communities and Development, 1985.

Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926).

Wheeler, Michael, Resolving Local Regulatory Disputes and Building Consensus For Affordable Housing, M.I.T. Working Paper #9, Center For Real Estate Development, 1988.



## INTERVIEWS

Baldassari, Carol - Metropolitan Area Planning Council

Cohen, Howard - Mintz, Levin, Cohn, Ferris, Glovsky & Popeo.

Corman, Murray - Chairman, Massachusetts Housing Appeals  
Committee.

DeLorey, Brian - Director, Tax Credit Program.

Frawley, Brian - Massachusetts Housing Finance Agency.

Gagliardi, Peter - Homeownership Opportunity Program.

Grace, Augusto - Chair., Special Commission on Implementation  
of Low and Moderate Income Housing Provisions.

Kelley, Edwin - Housing Appeals Committee.

McGrath, Tod - Massachusetts Institute of Technology.

Monahan, Gail - Director, TELLER program.

Zapata, Cesar - Director, SHARP and MHFA programs.

## Appendix A

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (4A) SHARP DEAL WITH 8.5% TAX-EXEMPT FINANCING, WITHOUT TAX CREDITS
5 DAVID CARTER
6
7 *****
```

```

118 *****
119
120 OPERATING ASSUMPTIONS:                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:      28-Jul-88
121 *****                                *****
122 OPERATING EXPENSES PER UNIT            $4,000      SHARP FUNDING (YES OR NO)      YES
123 LAUNDRY INCOME (NET) PER UNIT         $100        LIMITED DIVIDEND DISTRIBUTION  YES
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR $275        (YES OR NO)
125                                         DIVIDEND DISTRIBUTION %      6.00%
126 FINANCING ASSUMPTIONS:
127 *****                                LAND COST      $1,600,000
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION  10.00%      UNIT LAND COST      $16,000
129 (AS A % OF TOTAL DEVELOPMENT COST)
130                                         MINIMUM % AFFORDABLE UNITS      25.00%
131 TAX ASSUMPTIONS:
132 *****                                SITE SIZE IN ACRES (NET OF ROADS)      20.0
133 TAX CREDIT %      0.00%      DENSITY (UNITS/ACRE)      5.0
134                                         TOTAL UNITS IN DEVELOPMENT (CALC)      100
135
136 HOLDING PERIOD AFTER COMPLETION      10.0      UNIT LAND COST/DENSITY TOGGLE      1
137                                         (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```

8	*****								
9									
10	DEVELOPMENT PLAN:						28-Jul-88		
11	*****								
12									
13									
14					PROJECTED	PROJECTED			
15				TOTAL	MONTHLY	ANNUAL	PROJECTED		
16	RENTABLE	# OF	RENTABLE	RENT/	RENT/	1ST YEAR			
17	SQ.FT.	UNITS	SQ.FT.	UNIT	UNIT	RENT ROLL			
18	-----	-----	-----	-----	-----	-----			
19	TWO BEDROOM, LOW INCOME (A)	6	6,000	\$650	\$7,800	\$46,800			
20	TWO BEDROOM, LOW INCOME (B)	6	6,600	650	7,800	46,800			
21	TWO BEDROOM, MARKET (A)	30	30,000	1,000	12,000	360,000			
22	TWO BEDROOM, MARKET (B)	30	33,000	1,200	14,400	432,000			
23	THREE BEDROOM, LOW INCOME (A)	6	6,600	900	10,800	64,800			
24	THREE BEDROOM, LOW INCOME (B)	6	7,800	900	10,800	64,800			
25	THREE BEDROOM, MARKET (A)	8	8,800	1,150	13,800	110,400			
26	THREE BEDROOM, MARKET (B)	8	10,400	1,250	15,000	120,000			
27		-----	-----			-----			
28	TOTALS	100	109,200			\$1,245,600			
29									
30									
31	"AVERAGE" LOW INCOME UNIT	24	27,000	775	9,300	223,200			
32	"AVERAGE" MARKET UNIT	76	82,200	1,121	13,453	1,022,400			
33		-----	-----			-----			
34		100	109,200			\$1,245,600			
35									
36	*****								

37	*****				
38					
39	DEVELOPMENT COST ASSUMPTIONS:				28-Jul-88
40	=====				
41					
42					
43		LINE	COST/		% OF
44		ITEM	RENTABLE	COST/	TOTAL
45		COSTS	SQ.FT.	UNIT	COSTS
46		----	-----	-----	-----
47					
48	LAND ACQUISITION	\$1,600,000	\$14.65	\$16,000	13.94%
49					
50					
51	"HARD COSTS":				
52					
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.33	59,325	51.68%
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.58	5,000	4.36%
55		-----	-----	-----	-----
56	TOTAL HARD COSTS	6,432,500	58.91	64,325	56.04%
57					
58					
59	"SOFT" COSTS:				
60					
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.55%
62	BOND PREMIUM (.004%)	25,730	0.24	257	0.22%
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.31%
64	CONSTRUCTION LOAN INTEREST	551,801	5.05	5,518	4.81%
65	DAS APPLICATION FEE	8,211	0.08	82	0.07%
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%
67	INSPECTION FEE	41,053	0.38	411	0.36%
68	LOAN POINTS	168,809	1.55	1,688	1.47%
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%
70	INSURANCE	100,000	0.92	1,000	0.87%
71	LEGAL FEES	100,000	0.92	1,000	0.87%
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%
74	RENT-UP AND MARKETING	50,000	0.46	500	0.44%
75	DEVELOPER'S FEE	1,575,500	14.43	15,755	13.73%
76	DEVELOPER'S OVERHEAD	393,875	3.61	3,939	3.43%
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.28%
78		-----	-----	-----	-----
79	TOTAL SOFT COSTS	3,446,024	31.56	34,460	30.02%
80					
81					
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,478,524	\$105.11	\$114,785	100.00%
83		=====	=====	=====	=====
84	TOTAL CASH DEVELOPMENT COSTS	\$9,509,149			
85		=====			
86					
87	*****				





203	*****
204	
205	ANALYSIS OF PROJECT DEBT SERVICE:
206	=====
207	
208	
209	
210	
211	MORTGAGE PRINCIPAL \$8,558,234
212	INTEREST RATE 8.50%
213	MMFA ADMINISTRATIVE FEE 0.50%
214	TERM 30
215	ANNUAL PAYMENT \$833,027
216	ANNUAL PAYMENT CONSTANT 10.17%
217	
218	
219	
220	
221	
222	
223	
224	
225	
226	
227	
228	
229	
230	
231	
232	
233	
234	
235	
236	
237	
238	
239	
240	
241	
242	
243	
244	
245	
246	
247	
248	
249	
250	
251	
252	
253	*****



256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):																28 Jul-88
257																	
258																	
259																	
260	EFFECTIVE TAX RATE	20.00%	:-CONSTRUCTION:-		INVESTMENT YEARS					INVESTMENT YEARS							
261																	
262		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
263		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
264		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
265																	
266	NET OPERATING INCOME	\$0	\$0	\$0	\$793,320	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$1,366,264	\$1,451,156	\$1,541,287	\$1,636,779
267																	
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386
269	LESS MORTGAGE INTEREST & FEES	0	0	0	770,241	764,590	758,431	751,717	744,399	736,423	727,729	718,252	707,922	696,662	684,389	671,012	656,431
270	LESS DEPRECIATION	0	0	0	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790
271	LESS AMORTIZATION: MHA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
273	TAXABLE INCOME	0	0	0	(250,838)	(194,333)	(134,189)	(70,166)	(2,013)	70,542	147,788	230,031	317,600	410,847	510,144	615,893	728,518
274	TAX BENEFIT (LIABILITY)	0	0	0	70,235	54,413	37,573	19,647	564	(19,752)	(41,381)	(64,409)	(88,928)	(115,037)	(142,840)	(172,450)	(203,985)
275																	
276	INVESTMENT TAX CREDITS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
277		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
278																	
279	TOTAL TAX BENEFITS (LIABILITY)	\$0	\$0	\$0	\$70,235	\$54,413	\$37,573	\$19,647	\$564	\$(19,752)	\$(41,381)	\$(64,409)	\$(88,928)	\$(115,037)	\$(142,840)	\$(172,450)	\$(203,985)
280		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
281																	
282																	
283																	
284																	
285	PROFORMA ANALYSIS OF AFTER-TAX CASH FLOWS:															28 Jul-88	
286																	
287																	
288																	
289																	
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	:-CONSTRUCTION:-		INVESTMENT YEARS					INVESTMENT YEARS							
291																	
292		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
293		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
294		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
295																	
296	CASH INVESTMENT	\$(1,600,000)	\$0	\$649,085	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	0	9,772	62,313	118,106	177,350	190,655	190,655	190,655	190,655	190,655	0	0	0
298	TAX BENEFIT (LIABILITY)	0	0	0	70,235	54,413	37,573	19,647	564	(19,752)	(41,381)	(64,409)	(88,928)	(115,037)	0	0	0
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	5,855,181	0	0	0
300		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
301																	
302	TOTAL AFTER-TAX CASH FLOWS	\$(1,600,000)	\$0	\$649,085	\$70,235	\$64,413	\$99,886	\$137,752	\$177,913	\$170,904	\$149,275	\$126,247	\$101,727	\$5,930,800	\$0	\$0	\$0
303																	
304	AFTER-TAX NET PRESENT VALUE	\$82,090															
305	AFTER TAX INTERNAL RATE OF RETURN	18.2%															
306		----															
307																	
308																	

309	*****		
310			*
311	ANALYSIS OF NET SALES PROCEEDS:	28-Jul-88	*
312	*****		*
313			*
314			*
315			*
316			*
317	GROSS SALES PRICE*	\$15,180,714	*
318			*
319	LESS COMMISSION @ 3%	455,421	*
320	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
321		-----	*
322	NET SALES PRICE	14,725,293	*
323			*
324	LESS ADJUSTED BASIS:		*
325	COST BASIS	9,903,024	*
326	PLUS: APPLICATION OF RESERVE	345,892	*
327	LESS: DEPRECIATION	2,957,896	*
328	LESS: COST AMORTIZATION	56,270	*
329		-----	*
330		7,234,750	*
331		-----	*
332	TAXABLE GAIN ON SALE	7,490,542	*
333			*
334	TAX LIABILITY	\$2,097,352	*
335		=====	*
336			*
337			*
338	-----		*
339			*
340			*
341	GROSS SALES PRICE*	\$15,180,714	*
342			*
343	LESS COMMISSION @ 3%	455,421	*
344	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
345		-----	*
346	NET SALES PRICE	14,725,293	*
347			*
348	LESS TAX LIABILITY	2,097,352	*
349	LESS OUTSTANDING DEBT:		*
350	FIRST MORTGAGE LOAN	7,604,328	*
351	SHARP LOAN	(0)	*
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)	831,568	*
353		-----	*
354			*
355	NET SALES PROCEEDS	\$5,855,181	*
356		=====	*
357	* + NET OPERATING INCOME CAPITALIZED @ 9.0%		*
358			*
359	*****		*

360															
361															
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:														
363															
364															
365															
366															
367															
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13
370	SOURCES OF CASH:														
371															
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MHA MORTGAGE FINANCING	0	4,279,117	4,279,117	0	0	0	0	0	0	0	0	0	0	0
374	SHARP FUNDING	0	0	0	123,010	0	0	0	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	793,320	842,799	895,340	951,133	1,010,377	1,073,284	1,140,080	1,211,004	1,286,309	1,366,264	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	0	0	0	0	15,879	39,552	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	14,725,293	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	831,568	0
379															
380															
381	TOTAL SOURCES OF CASH	\$1,600,000	\$4,279,117	\$4,279,117	\$916,330	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$1,366,264	\$0
382															
383															
384	USES OF CASH:														
385															
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAIN	0	4,279,117	4,279,117	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST & FEES: MHA MORTGAGE	0	0	0	770,241	764,590	758,431	751,717	744,399	736,423	727,729	718,252	707,922	696,662	0
389	AMORTIZATION: MHA MORTGAGE	0	0	0	62,796	68,427	74,536	81,310	88,628	96,604	105,299	114,776	125,105	136,693	0
390	MHA REQUIRED DEBT SERVICE RESERVE	0	0	0	83,303	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHARP FUNDING	0	0	0	0	0	0	0	0	49,601	116,397	512	(0)	(0)	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	0	0	2,017,352	0
393	"LIMITED DIVIDEND" DISTRIBUTIONS	0	0	0	0	9,772	62,313	118,106	177,350	190,655	190,655	190,655	190,655	6,045,837	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	186,809	278,505	382,133	0
395															
396															
397	TOTAL USES OF CASH	\$1,600,000	\$4,279,117	\$4,279,117	\$916,330	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,302,187	\$1,366,264	\$0
398															
399															
400															

```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:                28-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T                $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                0
411
412 AFTER-TAX NET PRESENT VALUE ("AT"              $82,000
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      DELAYED      "ATNPV"      VALUE OF
418           -----      -----      -----      -----
419
420           0      $82,000                0      $82,000
421           1      60,000                0      60,000
422           2      38,000                0      38,000
423           3      16,000                0      16,000
424           4      (6,000)                0      (6,000)
425           5      (27,000)                0      (27,000)
426           6      (48,000)                0      (48,000)
427           7      (69,000)                0      (69,000)
428           8      (89,000)                0      (89,000)
429           9      (109,000)                0      (109,000)
430           10     (129,000)                0      (129,000)
431           11     (149,000)                0      (149,000)
432           12     (168,000)                0      (168,000)
433           13     (187,000)                0      (187,000)
434           14     (206,000)                0      (206,000)
435           15     (225,000)                0      (225,000)
436           16     (243,000)                0      (243,000)
437           17     (261,000)                0      (261,000)
438           18     (279,000)                0      (279,000)
439           19     (297,000)                0      (297,000)
440           20     (314,000)                0      (314,000)
441           21     (331,000)                0      (331,000)
442           22     (348,000)                0      (348,000)
443           23     (365,000)                0      (365,000)
444           24     (381,000)                0      (381,000)
445
446 *****

```



```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE    NPV
473          -----
474
475          2.00  (9650,000)
476          2.25  (549,000)
477          2.50  (543,000)
478          2.75  (438,000)
479          3.00  (348,000)
480          3.25  (338,000)
481          3.50  (286,000)
482          3.75  (206,000)
483          4.00  (202,000)
484          4.25  (106,000)
485          4.50   (20,000)
486          4.75   79,000
487          5.00   82,000
488          5.25  181,000
489          5.50  269,000
490          5.75  283,000
491          6.00  375,000
492          6.25  482,000
493          6.50  484,000
494          6.75  590,000
495          7.00  683,000
496          7.25  697,000
497          7.50  790,000
498          7.75  893,000
499          8.00  897,000
500          8.25  999,000
501          8.50 1,092,000
502          8.75 1,097,000
503          9.00 1,199,000
504          9.25 1,301,000
505          9.50 1,407,000
506          9.75 1,414,000
507          10.00 1,519,000
508
509 *****

```

## Appendix B

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (4B) SHARP DEAL WITH 10.0% TAXABLE FINANCING, WITHOUT TAX CREDITS
5 DAVID CARTER
6
7 *****
```

```

118 *****
119
120 OPERATING ASSUMPTIONS:                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:    28-Jul-88
121 =====
122 OPERATING EXPENSES PER UNIT            $4,000    SHARP FUNDING (YES OR NO)                YES
123 LAUNDRY INCOME (NET) PER UNIT          $100    LIMITED DIVIDEND DISTRIBUTION            YES
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR  $275    (YES OR NO)
125                                           DIVIDEND DISTRIBUTION %                    6.00%
126 FINANCING ASSUMPTIONS:
127 =====
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%    LAND COST                                $1,600,000
129 (AS A % OF TOTAL DEVELOPMENT COST)      UNIT LAND COST                            $16,000
130                                           MINIMUM % AFFORDABLE UNITS                25.00%
131 TAX ASSUMPTIONS:
132 =====
133 TAX CREDIT %                            0.00%    SITE SIZE IN ACRES (NET OF ROADS)        20.0
134                                           DENSITY (UNITS/ACRE)                      5.0
135                                           TOTAL UNITS IN DEVELOPMENT (CALC)         100
136 HOLDING PERIOD AFTER COMPLETION          10.0    UNIT LAND COST/DENSITY TOGGLE            1
137                                           (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```





37	*****					
38						*
39	DEVELOPMENT COST ASSUMPTIONS:				28-Jul-98	*
40	*****					*
41						*
42						*
43		LINE	COST/		% OF	*
44		ITEM	RENTABLE	COST/	TOTAL	*
45		COSTS	SQ.FT.	UNIT	COSTS	*
46		-----	-----	-----	-----	*
47						*
48	LAND ACQUISITION	\$1,600,000	\$14.65	\$16,000	13.81%	*
49						*
50						*
51	"HARD COSTS":					*
52						*
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.33	59,325	51.22%	*
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.58	5,000	4.32%	*
55		-----	-----	-----	-----	*
56	TOTAL HARD COSTS	6,432,500	58.91	64,325	55.54%	*
57						*
58						*
59	"SOFT" COSTS:					*
60						*
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.54%	*
62	BOND PREMIUM (.004%)	25,730	0.24	257	0.22%	*
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.30%	*
64	CONSTRUCTION LOAN INTEREST	634,571	5.81	6,346	5.48%	*
65	OAS APPLICATION FEE	8,211	0.08	82	0.07%	*
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%	*
67	INSPECTION FEE	41,053	0.38	411	0.35%	*
68	LOAN POINTS	169,809	1.55	1,688	1.46%	*
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%	*
70	INSURANCE	100,000	0.92	1,000	0.86%	*
71	LEGAL FEES	100,000	0.92	1,000	0.86%	*
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%	*
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%	*
74	RENT-UP AND MARKETING	50,000	0.46	500	0.43%	*
75	DEVELOPER'S FEE	1,592,054	14.58	15,921	13.75%	*
76	DEVELOPER'S OVERHEAD	398,014	3.64	3,980	3.44%	*
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.27%	*
78		-----	-----	-----	-----	*
79	TOTAL SOFT COSTS	3,549,487	32.50	35,495	30.65%	*
80						*
81						*
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,981,987	\$106.06	\$115,820	100.00%	*
83		=====	=====	=====	=====	*
84	TOTAL CASH DEVELOPMENT COSTS	\$9,591,919				*
85		=====				*
86						*
87	*****					*

38	*****					
39						
90	DEVELOPMENT COST ASSUMPTIONS: ESTIMATED BREAKDOWN OF RESIDENTIAL CONSTRUCTION COSTS				28-Jul-88	
91	=====					
92						
93						
94						
95						
96		LINE	COST/		% OF	
97		ITEM	RENTABLE	COST/	TOTAL	
98		COSTS	SQ.FT.	UNIT	"HARD"	
99		-----	-----	-----	COSTS	
100						
101						
102	RESIDENTIAL CONSTRUCTION COSTS:					
103						
104	SITE PREPARATION AND IMPROVEMENTS	\$200,000	\$1.83	\$2,000	3.37%	
105	SUBGRADE	1,000,000	9.16	10,000	16.86%	
106	FRAMING	1,400,000	12.82	14,000	23.60%	
107	ENCLOSURE	700,000	6.41	7,000	11.80%	
108	INTERIOR FINISHINGS & FITTINGS	1,300,000	11.90	13,000	21.91%	
109	MECHANICAL/ELECTRICAL/PLUMBING	1,000,000	9.16	10,000	16.86%	
110	OTHER MISCELLANEOUS	50,000	0.46	500	0.84%	
111	CONTINGENCY @ 5%	282,500	2.59	2,825	4.76%	
112		-----	-----	-----	-----	
113						
114	TOTAL RESIDENTIAL CONSTRUCTION COSTS	\$5,332,500	\$54.33	\$59,325	100.00%	
115		=====	=====	=====	=====	
116						
117	*****					

140																28-Jul-88
141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:															
142																
143																
144	REVENUE GROWTH FACTOR: MARKET UNITS	6.01														
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS	5.01														
146	EXPENSE GROWTH FACTOR	5.01														
147																
148																
149																
150		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
151	POTENTIAL REVENUES:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
152	LOW INCOME UNITS	15														
153	MARKET UNITS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
154		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
155		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
156	TOTAL POTENTIAL REVENUES	1,245,600	1,318,104	1,394,847	1,476,077	1,562,057	1,653,068	1,749,403	1,851,376	1,959,318	2,073,580	2,194,532	2,322,568	2,458,105	2,601,583	
157		1,245,600	1,318,104	1,394,847	1,476,077	1,562,057	1,653,068	1,749,403	1,851,376	1,959,318	2,073,580	2,194,532	2,322,568	2,458,105	2,601,583	
158	LESS VACANCY @ 5%	62,280	65,905	69,742	73,804	78,103	82,653	87,470	92,569	97,966	103,679	109,727	116,128	122,905	130,079	
159	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,938	16,895	17,908	18,983	20,122	21,329	
160		1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	
161		1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	
162	EFFECTIVE GROSS INCOME	1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	
163		1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	
164	LESS OPERATING EXPENSES	37,500	39,125	40,681	42,275	43,904	45,568	47,268	48,996	50,752	52,537	54,352	56,197	58,072	59,977	
165	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,825	33,394	35,028	36,728	38,488	40,300	42,164	44,081	46,051	48,074	50,151	
166		27,500	28,875	30,319	31,825	33,394	35,028	36,728	38,488	40,300	42,164	44,081	46,051	48,074	50,151	
167		27,500	28,875	30,319	31,825	33,394	35,028	36,728	38,488	40,300	42,164	44,081	46,051	48,074	50,151	
168	NET OPERATING INCOME	788,320	842,799	895,340	951,183	1,010,271	1,073,204	1,140,122	1,211,360	1,286,309	1,366,264	1,451,156	1,541,287	1,636,979	1,738,573	
169		788,320	842,799	895,340	951,183	1,010,271	1,073,204	1,140,122	1,211,360	1,286,309	1,366,264	1,451,156	1,541,287	1,636,979	1,738,573	
170	LESS DEBT SERVICE:															
171	INTEREST	906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	824,630	811,030	796,001	779,394	
172	PRINCIPAL	47,726	52,737	58,274	64,312	71,155	78,826	86,882	95,004	104,085	113,132	122,152	131,133	140,062	148,949	
173		906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	824,630	811,030	796,001	779,394	
174		906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	824,630	811,030	796,001	779,394	
175	CASH FLOW (DEFICIT) FROM OPERATIONS	(160,842)	(111,363)	(65,822)	(13,029)	456,215	1,119,122	1,185,918	1,256,841	1,322,146	1,391,102	1,462,994	1,537,125	1,614,817	1,695,411	
176	FUNDING REQUIRED FOR DEBT COVERAGE (1.1 YR)	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	
177		256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	
178	SOURCES OF FUNDING:															
179	MAXIMUM SHARP OUTLAY (PER MW)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
180	SHARP FUNDS ADVANCED	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	
181	REQUIRED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
182	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	0	0	0	56,215	119,122	185,918	256,841	332,146	412,102	496,994	587,125	682,817	784,411	
183	PERMITTED CASH DISTRIBUTIONS TO DEV.	0	0	0	0	56,215	119,122	185,918	256,841	332,146	412,102	496,994	587,125	682,817	784,411	
184		0	0	0	0	56,215	119,122	185,918	256,841	332,146	412,102	496,994	587,125	682,817	784,411	
185	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	
186		1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	
187		1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	
188		1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	
189		1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	
190	ANALYSIS OF SHARP FUNDING & REPAYMENT:															
191		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
192		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
193		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
194		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
195	SHARP FUNDS ADVANCED	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	
196	INTEREST @ 5%	6,406	15,917	20,968	23,563	24,816	26,057	27,260	28,428	29,562	30,664	31,734	32,773	33,782	34,761	
197	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
198	OUTSTANDING BALANCE	262,663	389,946	469,735	496,327	521,144	547,201	574,561	603,241	633,263	664,637	697,375	731,488	766,975	803,846	
199	ANNUAL NON DISTRIBUTED PROJECT CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
200	CUMULATIVE NON DISTRIBUTED CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
201		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
202		0	0	0	0	0	0	0	0	0	0	0	0	0	0	





309	*****		
310			*
311	ANALYSIS OF NET SALES PROCEEDS:	29-Jul-88	*
312	*****		*
313			*
314			*
315			*
316			*
317	GROSS SALES PRICE*	\$15,180,714	*
318			*
319	LESS COMMISSION @ 3%	455,421	*
320	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
321		-----	*
322	NET SALES PRICE	14,725,293	*
323			*
324	LESS ADJUSTED BASIS:		*
325	COST BASIS	9,989,933	*
326	PLUS: APPLICATION OF RESERVE	345,892	*
327	LESS: DEPRECIATION	2,989,499	*
328	LESS: COST AMORTIZATION	56,270	*
329		-----	*
330		7,290,056	*
331		-----	*
332	TAXABLE GAIN ON SALE	7,435,237	*
333			*
334	TAX LIABILITY	\$2,081,866	*
335		-----	*
336			*
337			*
338	-----		*
339			*
340			*
341	GROSS SALES PRICE*	\$15,180,714	*
342			*
343	LESS COMMISSION @ 3%	455,421	*
344	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
345		-----	*
346	NET SALES PRICE	14,725,293	*
347			*
348	LESS TAX LIABILITY	2,081,866	*
349	LESS OUTSTANDING DEBT:		*
350	FIRST MORTGAGE LOAN	7,853,623	*
351	SHARP LOAN	0	*
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)	0	*
353		-----	*
354			*
355	NET SALES PROCEEDS	\$4,789,804	*
356		-----	*
357	* * NET OPERATING INCOME CAPITALIZED @ 9.0%		*
358			*
359	*****		*

360															
361															
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:														
363															
364															
365															
366															
367															
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13
370	SOURCES OF CASH:														
371															
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MHA MORTGAGE FINANCING	0	4,316,364	4,316,364	0	0	0	0	0	0	0	0	0	0	0
374	SHARP FUNDING	0	0	0	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	732,220	842,799	895,340	951,133	1,010,377	1,073,284	1,140,080	1,211,004	1,286,309	1,366,264	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	14,725,293	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
379															
380															
381	TOTAL SOURCES OF CASH	\$1,600,000	\$4,316,364	\$4,316,364	\$1,049,578	\$954,162	\$954,162	\$954,162	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$16,091,557	\$0
382															
383															
384	USES OF CASH:														
385															
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAW	0	4,316,364	4,316,364	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST FEES: MHA MORTGAGE	0	0	0	906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	0
389	AMORTIZATION: MHA MORTGAGE	0	0	0	47,726	52,737	58,274	64,393	71,155	78,626	86,882	96,004	106,085	116,846	0
390	MHA REQUIRED DEBT SERVICE RESERVE	0	0	0	95,416	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHARP FUNDING	0	0	0	0	0	0	0	0	0	0	64,448	139,753	219,708	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	0	0	2,081,866	0
393	"LIMITED DIVIDEND" DISTRIBUTIONS	0	0	0	0	0	0	56,215	119,122	185,918	192,394	192,394	192,394	4,982,197	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
395															
396															
397	TOTAL USES OF CASH	\$1,600,000	\$4,316,364	\$4,316,364	\$1,049,578	\$954,162	\$954,162	\$954,162	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$16,091,557	\$0
398															
399															
400															



```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:                29-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T              $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                0
411
412 AFTER-TAX NET PRESENT VALUE ("AT" ($83,000)
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      DELAYED      "ATNPV"      VALUE OF
418           -----      -----      -----      -----
419
420           0      ($83,000)              $0      ($83,000)
421           1      (104,000)              0      (104,000)
422           2      (124,000)              0      (124,000)
423           3      (143,000)              0      (143,000)
424           4      (163,000)              0      (163,000)
425           5      (182,000)              0      (182,000)
426           6      (201,000)              0      (201,000)
427           7      (220,000)              0      (220,000)
428           8      (238,000)              0      (238,000)
429           9      (256,000)              0      (256,000)
430          10      (274,000)              0      (274,000)
431          11      (292,000)              0      (292,000)
432          12      (309,000)              0      (309,000)
433          13      (326,000)              0      (326,000)
434          14      (343,000)              0      (343,000)
435          15      (360,000)              0      (360,000)
436          16      (377,000)              0      (377,000)
437          17      (393,000)              0      (393,000)
438          18      (409,000)              0      (409,000)
439          19      (425,000)              0      (425,000)
440          20      (441,000)              0      (441,000)
441          21      (456,000)              0      (456,000)
442          22      (472,000)              0      (472,000)
443          23      (487,000)              0      (487,000)
444          24      (501,000)              0      (501,000)
445
446 *****

```

447	*****									
448										
449	SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS									
450	=====									
451				UNIT LAND COSTS						28-Jul-98
452	-ATNPV	\$0	\$4,000	\$8,000	\$12,000	\$16,000	\$20,000	\$24,000		
453		0.00%	(440,000)	(671,000)	(902,000)	(1,133,000)	(1,364,000)	(1,595,000)	(1,825,000)	
454		1.00%	(250,000)	(481,000)	(712,000)	(943,000)	(1,173,000)	(1,404,000)	(1,635,000)	
455		2.00%	(53,000)	(293,000)	(513,000)	(737,000)	(968,000)	(1,199,000)	(1,430,000)	
456	ANNUAL	3.00%	166,000	(94,000)	(328,000)	(550,000)	(769,000)	(987,000)	(1,209,000)	
457	REVENUE	4.00%	368,000	132,000	(88,000)	(331,000)	(568,000)	(794,000)	(1,013,000)	
458	GROWTH	5.00%	589,000	344,000	107,000	(78,000)	(303,000)	(541,000)	(776,000)	
459	FACTOR	6.00%	816,000	577,000	342,000	110,000	(83,000)	(257,000)	(495,000)	
460	("MARKET" UNITS)	7.00%	1,054,000	819,000	587,000	355,000	129,000	(83,000)	(243,000)	
461		8.00%	1,303,000	1,075,000	842,000	617,000	388,000	163,000	(59,000)	
462		9.00%	1,569,000	1,341,000	1,112,000	888,000	663,000	440,000	215,000	
463		10.00%	1,852,000	1,626,000	1,398,000	1,177,000	953,000	730,000	510,000	
464										
465										
466	*****									

```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE    NPV
473          -----
474
475          2.00  ($750,000)
476          2.25  (667,000)
477          2.50  (669,000)
478          2.75  (573,000)
479          3.00  (493,000)
480          3.25  (486,000)
481          3.50  (399,000)
482          3.75  (301,000)
483          4.00  (303,000)
484          4.25  (205,000)
485          4.50  (141,000)
486          4.75  (88,000)
487          5.00  (83,000)
488          5.25  (29,000)
489          5.50   45,000
490          5.75   51,000
491          6.00  128,000
492          6.25  216,000
493          6.50  213,000
494          6.75  301,000
495          7.00  381,000
496          7.25  386,000
497          7.50  466,000
498          7.75  553,000
499          8.00  550,000
500          8.25  639,000
501          8.50  722,000
502          8.75  811,000
503          9.00  808,000
504          9.25  898,000
505          9.50  978,000
506          9.75  984,000
507          10.00 1,065,000
508
509 *****

```

## Appendix C

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (4C) SHARP DEAL WITH 8.5% TAX-EXEMPT FINANCING, WITH 4% TAX CREDITS
5 DAVID CARTER
6
7 *****
```

```

118 *****
119
120 OPERATING ASSUMPTIONS:                                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:      28-Jul-88
121 =====                                                =====
122 OPERATING EXPENSES PER UNIT          $4,000      SHARP FUNDING (YES OR NO)                      YES
123 LAUNDRY INCOME (NET) PER UNIT        $100      LIMITED DIVIDEND DISTRIBUTION                  YES
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR  $275      (YES OR NO)
125                                           DIVIDEND DISTRIBUTION %                        6.00%
126 FINANCING ASSUMPTIONS:
127 =====
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%      LAND COST                                     $1,600,000
129 (AS A % OF TOTAL DEVELOPMENT COST)      UNIT LAND COST                               $16,000
130                                           MINIMUM % AFFORDABLE UNITS                   25.00%
131 TAX ASSUMPTIONS:
132 =====
133 TAX CREDIT %                          4.00%      SITE SIZE IN ACRES (NET OF ROADS)             20.0
134                                           DENSITY (UNITS/ACRE)                         5.0
135                                           TOTAL UNITS IN DEVELOPMENT (CALC)            100
136 HOLDING PERIOD AFTER COMPLETION          10.0      UNIT LAND COST/DENSITY TOGGLE                  1
137                                           (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```



LINE	COST/ ITEM COSTS	RENTABLE SQ.FT.	COST/ UNIT	% OF TOTAL COSTS
DEVELOPMENT COST ASSUMPTIONS:				
28-Jul-88				
LAND ACQUISITION	\$1,600,000	\$14.65	\$16,000	13.94%
"HARD COSTS":				
RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.33	59,325	51.68%
LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.58	5,000	4.36%
TOTAL HARD COSTS	6,432,500	58.91	64,325	56.04%
"SOFT" COSTS:				
ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.55%
BOND PREMIUM (.004%)	25,730	0.24	257	0.22%
PERMITS AND SURVEYS	150,000	1.37	1,500	1.31%
CONSTRUCTION LOAN INTEREST	551,801	5.05	5,518	4.81%
OAS APPLICATION FEE	8,211	0.08	82	0.07%
MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%
INSPECTION FEE	41,053	0.38	411	0.36%
LOAN POINTS	168,809	1.55	1,688	1.47%
REAL ESTATE TAXES	25,000	0.23	250	0.22%
INSURANCE	100,000	0.92	1,000	0.87%
LEGAL FEES	100,000	0.92	1,000	0.87%
TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%
ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%
RENT-UP AND MARKETING	50,000	0.46	500	0.44%
DEVELOPER'S FEE	1,575,500	14.43	15,755	13.73%
DEVELOPER'S OVERHEAD	393,875	3.61	3,939	3.43%
SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.28%
TOTAL SOFT COSTS	3,446,024	31.56	34,460	30.02%
TOTAL DEVELOPMENT COSTS (MHFA)	\$11,478,524	\$105.11	\$114,785	100.00%
TOTAL CASH DEVELOPMENT COSTS	\$9,509,149			

LINE	COST/ ITEM	COST/ SQ.FT.	COST/ UNIT	% OF TOTAL "HARD" COSTS
DEVELOPMENT COST ASSUMPTIONS: ESTIMATED BREAKDOWN OF RESIDENTIAL CONSTRUCTION COSTS				
-----				
RESIDENTIAL CONSTRUCTION COSTS:				
SITE PREPARATION AND IMPROVEMENTS	\$200,000	\$1.83	\$2,000	3.37%
SUBGRADE	1,000,000	9.16	10,000	16.86%
FRAMING	1,400,000	12.82	14,000	23.60%
ENCLOSURE	700,000	6.41	7,000	11.80%
INTERIOR FINISHINGS & FITTINGS	1,300,000	11.90	13,000	21.91%
MECHANICAL/ELECTRICAL/PLUMBING	1,000,000	9.16	10,000	16.86%
OTHER MISCELLANEOUS	50,000	0.46	500	0.84%
CONTINGENCY @ 5%	282,500	2.59	2,825	4.76%
-----				
TOTAL RESIDENTIAL CONSTRUCTION COSTS	\$5,932,500	\$54.33	\$59,325	100.00%
=====				



140																28 Jul 88
141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:															
142	*****															
143																
144	REVENUE GROWTH FACTOR: MARKET UNITS	6.01														
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS	5.01														
146	EXPENSE GROWTH FACTOR	5.01														
147																
148		OPERATING YEARS							OPERATING YEARS							
149		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
150		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
151	POTENTIAL REVENUES:															
152	LOW INCOME UNITS	\$223,200	\$224,360	\$246,078	\$258,382	\$271,301	\$284,866	\$299,109	\$314,065	\$329,768	\$346,256	\$363,569	\$381,748	\$400,835	\$420,877	
153	MARKET UNITS	1,022,400	1,083,744	1,148,769	1,217,695	1,290,756	1,368,202	1,450,294	1,537,312	1,629,550	1,727,323	1,820,963	1,940,820	2,057,270	2,180,706	
154																
155																
156	TOTAL POTENTIAL REVENUES	1,245,600	1,318,104	1,394,847	1,476,077	1,562,057	1,653,068	1,749,403	1,851,376	1,959,318	2,073,580	2,194,532	2,322,568	2,458,105	2,601,583	
157																
158	LESS VACANCY @ 5%	62,280	65,905	69,742	73,804	78,103	82,653	87,470	92,569	97,966	103,679	109,727	116,128	122,905	130,079	
159	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,938	16,895	17,908	18,983	20,122	21,329	
160																
161																
162	EFFECTIVE GROSS INCOME	1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	
163																
164	LESS OPERATING EXPENSES	372,500	391,125	410,681	431,215	452,776	475,415	499,186	524,145	550,352	577,870	606,763	637,101	668,956	702,404	
165	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386	51,855	
166																
167		27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386	51,855	
168	NET OPERATING INCOME	793,320	842,799	895,340	951,133	1,010,377	1,073,284	1,140,000	1,211,004	1,286,309	1,366,264	1,451,156	1,541,287	1,636,979	1,738,573	
169																
170	LESS DEBT SERVICE:															
171	INTEREST	770,241	784,590	798,431	791,717	744,399	736,423	727,729	718,252	707,922	696,662	684,389	671,012	656,431	640,537	
172	PRINCIPAL	62,786	68,437	74,596	81,310	88,628	96,604	105,299	114,776	125,105	136,365	148,638	162,015	176,597	192,490	
173																
174																
175	CASH FLOW (DEFICIT) FROM OPERATIONS	(839,707)	89,772	862,313	8118,106	8177,250	8240,257	8307,053	8377,976	8453,281	8533,237	8618,129	8708,260	8803,952	8905,546	
176	FUNDING REQUIRED FOR DEBT COVERAGE (1:1 TRI)	123,010	0	0	0	0	0	0	0	0	0	0	0	0	0	
177																
178	SOURCES OF FUNDING:															
179	MAXIMUM SHARP OUTLAY (PER INHA)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
180	SHARP FUNDS ADVANCED	123,010	0	0	0	0	0	0	0	0	0	0	0	0	0	
181	REQUIRED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
182	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	9,772	62,313	118,106	177,350	240,257	307,053	377,976	453,281	537,237	618,129	708,260	803,952	905,546	
183	PERMITTED CASH DISTRIBUTIONS TO DEV.	90	89,772	862,313	8118,106	8177,350	8190,655	8190,655	8190,655	8190,655	8190,655	8190,655	8190,655	8190,655	8190,655	
184																
185	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	1.10	1.01	1.07	1.14	1.21	1.29	1.37	1.45	1.54	1.64	1.74	1.85	1.97	2.09	
186		1.10	1.01	1.07	1.14	1.21	1.29	1.37	1.45	1.54	1.64	1.74	1.85	1.97	2.09	
187	*****															
188	*****															
189																
190	ANALYSIS OF SHARP FUNDING & REPAYMENT:															
191	*****															
192		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
193		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
194																
195	SHARP FUNDS ADVANCED	\$123,010	90	90	90	90	90	90	90	90	90	90	90	90	90	
196	INTEREST @ 5%	3,075	6,304	6,619	6,950	7,298	7,663	8,046	8,437	8,835	9,239	9,649	10,064	10,485	10,911	
197	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
198	OUTSTANDING BALANCE	126,085	132,390	139,009	145,959	153,257	161,011	169,228	177,917	187,082	196,732	206,876	217,524	228,676	240,334	
199	ANNUAL NON-DISTRIBUTED PROJECT CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
200	CUMULATIVE NON-DISTRIBUTED CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
201																
202	*****															

203							28-Jul-88	
204								
205	ANALYSIS OF PROJECT DEBT SERVICE:							
206	=====							
207								
208								
209								
210								
211	MORTGAGE PRINCIPAL	\$8,558,234						
212	INTEREST RATE	8.50%						
213	MHFA ADMINISTRATIVE FEE	0.50%						
214	TERM	30						
215	ANNUAL PAYMENT	\$833,027						
216	ANNUAL PAYMENT CONSTANT	10.17%						
217				INTEREST				
218		YEAR	BEG. BAL.	PAYMENT	& FEES	AMORT'N	END. BAL.	
219		----	-----	-----	-----	-----	-----	
220								
221		1	\$8,558,234	\$833,027	\$770,241	\$62,786	\$8,495,448	
222		2	8,495,448	833,027	764,590	68,437	8,427,011	
223		3	8,427,011	833,027	758,431	74,596	8,352,415	
224		4	8,352,415	833,027	751,717	81,310	8,271,105	
225		5	8,271,105	833,027	744,399	88,628	8,182,477	
226		6	8,182,477	833,027	736,423	96,604	8,085,873	
227		7	8,085,873	833,027	727,729	105,299	7,980,574	
228		8	7,980,574	833,027	718,252	114,776	7,865,798	
229		9	7,865,798	833,027	707,922	125,105	7,740,693	
230		10	7,740,693	833,027	696,662	136,365	7,604,328	
231		11	7,604,328	833,027	684,389	148,638	7,455,690	
232		12	7,455,690	833,027	671,012	162,015	7,293,675	
233		13	7,293,675	833,027	656,431	176,597	7,117,078	
234		14	7,117,078	833,027	640,537	192,490	6,924,588	
235		15	6,924,588	833,027	623,213	209,814	6,714,773	
236		16	6,714,773	833,027	604,330	228,698	6,486,076	
237		17	6,486,076	833,027	583,747	249,280	6,236,795	
238		18	6,236,795	833,027	561,312	271,716	5,965,080	
239		19	5,965,080	833,027	536,857	296,170	5,668,909	
240		20	5,668,909	833,027	510,202	322,825	5,346,084	
241		21	5,346,084	833,027	481,148	351,980	4,994,204	
242		22	4,994,204	833,027	449,478	383,549	4,610,655	
243		23	4,610,655	833,027	414,959	418,068	4,192,587	
244		24	4,192,587	833,027	377,333	455,694	3,736,893	
245		25	3,736,893	833,027	336,320	496,707	3,240,186	
246		26	3,240,186	833,027	291,617	541,411	2,698,775	
247		27	2,698,775	833,027	242,890	590,138	2,108,638	
248		28	2,108,638	833,027	189,777	643,250	1,465,388	
249		29	1,465,388	833,027	131,885	701,142	764,245	
250		30	764,245	833,027	68,782	764,245	0	
251								
252								
253								

254																28-Jul-88	
255																	
256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):																
257																	
258																	
259																	
260	EFFECTIVE TAX RATE	20.00%	:-CONSTRUCTION:-			INVESTMENT YEARS					INVESTMENT YEARS						
261																	
262		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
263		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
264		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	
265																	
266	NET OPERATING INCOME	\$0	\$0	\$0	\$793,320	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$1,366,264	\$1,451,158	\$1,541,287	\$1,636,979
267																	
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386
269	LESS MORTGAGE INTEREST & FEES	0	0	0	770,241	764,590	758,431	751,717	744,399	736,423	727,729	718,252	707,922	696,662	684,389	671,012	656,431
270	LESS DEPRECIATION	0	0	0	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790	295,790
271	LESS AMORTIZATION: RMFA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272																	
273	TAXABLE INCOME	0	0	0	(250,838)	(194,333)	(134,189)	(78,166)	(2,813)	70,542	147,788	230,031	317,600	410,847	510,144	615,893	728,518
274	TAX BENEFIT (LIABILITY)	0	0	0	70,235	54,413	37,573	19,647	564	(19,752)	(41,381)	(64,409)	(88,928)	(115,037)	(142,840)	(172,450)	(203,985)
275																	
276	INVESTMENT TAX CREDITS	0	0	0	80,448	80,448	80,448	80,448	80,448	80,448	80,448	80,448	80,448	80,448	0	0	0
277																	
278																	
279	TOTAL TAX BENEFITS (LIABILITY)	\$0	\$0	\$0	\$150,683	\$134,862	\$118,021	\$100,095	\$81,012	\$60,696	\$39,068	\$16,040	\$(8,480)	\$(34,589)	\$(142,840)	\$(172,450)	\$(203,985)
280																	
281																	
282																	
283																	
284																	
285	PROFORMA ANALYSIS OF AFTER TAX CASH FLOWS:																
286																	
287																	
288																	
289																	
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	:-CONSTRUCTION:-			INVESTMENT YEARS					INVESTMENT YEARS						
291																	
292		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
293		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
294		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
295																	
296	CASH INVESTMENT	\$(1,600,000)	\$0	\$649,085	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	0	9,772	62,313	118,106	177,250	190,655	190,655	190,655	190,655	190,655	190,655	190,655	190,655
298	TAX BENEFIT (LIABILITY)	0	0	0	150,683	134,862	118,021	100,095	81,012	60,696	39,068	16,040	(8,480)	(34,589)	0	0	0
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	5,855,181	0	0	0
300																	
301																	
302	TOTAL AFTER-TAX CASH FLOWS	\$(1,600,000)	\$0	\$649,085	\$150,683	\$144,633	\$180,334	\$218,201	\$258,361	\$251,352	\$229,723	\$206,695	\$182,176	\$6,011,248	\$0	\$0	\$0
303																	
304	AFTER TAX NET PRESENT VALUE	\$349,000															
305	AFTER TAX INTERNAL RATE OF RETURN	20.6%															
306																	
307																	
308																	

309	*****		
310			*
311	ANALYSIS OF NET SALES PROCEEDS:	28-Jul-88	*
312	*****		*
313			*
314			*
315			*
316			*
317	GROSS SALES PRICE*	\$15,180,714	*
318			*
319	LESS COMMISSION @ 3%	455,421	*
320	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
321		-----	*
322	NET SALES PRICE	14,725,293	*
323			*
324	LESS ADJUSTED BASIS:		*
325	COST BASIS	9,903,024	*
326	PLUS: APPLICATION OF RESERVE	345,892	*
327	LESS: DEPRECIATION	2,957,896	*
328	LESS: COST AMORTIZATION	56,270	*
329		-----	*
330		7,234,750	*
331		-----	*
332	TAXABLE GAIN ON SALE	7,490,542	*
333			*
334	TAX LIABILITY	\$2,097,352	*
335		=====	*
336			*
337			*
338	-----		*
339			*
340			*
341	GROSS SALES PRICE*	\$15,180,714	*
342			*
343	LESS COMMISSION @ 3%	455,421	*
344	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	*
345		-----	*
346	NET SALES PRICE	14,725,293	*
347			*
348	LESS TAX LIABILITY	2,097,352	*
349	LESS OUTSTANDING DEBT:		*
350	FIRST MORTGAGE LOAN	7,604,328	*
351	SHARP LOAN	(0)	*
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)	831,568	*
353		-----	*
354			*
355	NET SALES PROCEEDS	\$5,855,191	*
356		=====	*
357	* * NET OPERATING INCOME CAPITALIZED @ 9.0%		*
358			*
359	*****		*

360																	
361																	
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:																
363																	
364																	
365																	
366																	
367																	
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
370	SOURCES OF CASH:																
371																	
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MWA MORTGAGE FINANCING	0	4,279,117	4,279,117	0	0	0	0	0	0	0	0	0	0	0	0	0
374	SHARP FUNDING	0	0	0	123,010	0	0	0	0	0	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	793,320	842,799	895,340	951,133	1,010,377	1,073,284	1,140,080	1,211,004	1,286,309	1,366,264	0	0	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	0	0	0	0	15,879	39,552	0	0	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	14,725,293	0	0	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	831,568	0	0	0
379																	
380																	
381	TOTAL SOURCES OF CASH	\$1,600,000	\$4,279,117	\$4,279,117	\$916,330	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,302,187	\$16,962,677	\$0	\$0	\$0
382																	
383																	
384	USES OF CASH:																
385																	
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAIN	0	4,279,117	4,279,117	0	0	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST & FEES: MWA MORTGAGE	0	0	0	770,241	764,590	758,431	751,717	744,399	736,423	727,729	718,252	707,922	696,662	0	0	0
389	AMORTIZATION: MWA MORTGAGE	0	0	0	62,786	68,437	74,596	81,310	88,628	96,604	105,299	114,776	125,105	7,740,693	0	0	0
390	MWA REQUIRED DEBT SERVICE RESERVE	0	0	0	83,303	0	0	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHARP FUNDING	0	0	0	0	0	0	0	0	49,601	116,397	512	(0)	(0)	0	0	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	0	0	2,097,352	0	0	0
393	"LIMITED DIVIDEND" DISTRIBUTIONS	0	0	0	0	9,772	62,313	118,106	177,250	190,655	190,655	190,655	190,655	6,045,837	0	0	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	186,809	278,505	382,133	0	0	0
395																	
396																	
397	TOTAL USES OF CASH	\$1,600,000	\$4,279,117	\$4,279,117	\$916,330	\$842,799	\$895,340	\$951,133	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,302,187	\$16,962,677	\$0	\$0	\$0
398																	
399																	
400																	

```

401 *****
402
403 BREAK-EVEN TIME DELAY ANALYSIS:                28-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T                $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                  0
411
412 AFTER-TAX NET PRESENT VALUE ("AT" $349,000
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      "ATNPV"    "ATNPV"      VALUE OF
418           -----      -
419
420           0      $349,000      $0      $349,000
421           1      323,000      0      323,000
422           2      297,000      0      297,000
423           3      272,000      0      272,000
424           4      247,000      0      247,000
425           5      222,000      0      222,000
426           6      198,000      0      198,000
427           7      174,000      0      174,000
428           8      150,000      0      150,000
429           9      127,000      0      127,000
430          10      104,000      0      104,000
431          11       81,000      0       81,000
432          12       59,000      0       59,000
433          13       37,000      0       37,000
434          14       15,000      0       15,000
435          15      (7,000)      0      (7,000)
436          16     (28,000)      0     (28,000)
437          17     (49,000)      0     (49,000)
438          18     (70,000)      0     (70,000)
439          19     (90,000)      0     (90,000)
440          20    (110,000)      0    (110,000)
441          21    (130,000)      0    (130,000)
442          22    (150,000)      0    (150,000)
443          23    (169,000)      0    (169,000)
444          24    (188,000)      0    (188,000)
445
446 *****

```

447	*****								
448									*
449	SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS								*
450	=====								*
451								28-Jul-88	*
452			UNIT LAND COSTS						*
453		+ATNPV	\$4,000	\$8,000	\$12,000	\$16,000	\$20,000	\$24,000	*
454		0.00%	(153,000)	(426,000)	(676,000)	(900,000)	(1,123,000)	(1,347,000)	*
455		1.00%	46,000	(220,000)	(486,000)	(710,000)	(933,000)	(1,157,000)	*
456		2.00%	238,000	(28,000)	(291,000)	(522,000)	(736,000)	(951,000)	*
457	ANNUAL	3.00%	441,000	180,000	(75,000)	(323,000)	(550,000)	(767,000)	*
458	REVENUE	4.00%	643,000	389,000	131,000	(95,000)	(308,000)	(544,000)	*
459	GROWTH	5.00%	850,000	603,000	352,000	116,000	(113,000)	(302,000)	*
460	FACTOR	6.00%	1,066,000	825,000	579,000	349,000	122,000	(104,000)	*
461	("MARKET" UNITS)	7.00%	1,296,000	1,057,000	818,000	590,000	366,000	142,000	*
462		8.00%	1,537,000	1,304,000	1,066,000	845,000	619,000	402,000	*
463		9.00%	1,795,000	1,565,000	1,330,000	1,111,000	890,000	672,000	*
464		10.00%	2,072,000	1,842,000	1,613,000	1,394,000	1,175,000	959,000	*
465									*
466	*****								

```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE    NPV
473          -----
474
475          2.00  ($542,000)
476          2.25  (444,000)
477          2.50  (390,000)
478          2.75  (290,000)
479          3.00  (202,000)
480          3.25  (147,000)
481          3.50   (97,000)
482          3.75   (20,000)
483          4.00    29,000
484          4.25   122,000
485          4.50   206,000
486          4.75   302,000
487          5.00   349,000
488          5.25   445,000
489          5.50   522,000
490          5.75   587,000
491          6.00   678,000
492          6.25   783,000
493          6.50   828,000
494          6.75   931,000
495          7.00  1,023,000
496          7.25  1,078,000
497          7.50  1,170,000
498          7.75  1,271,000
499          8.00  1,317,000
500          8.25  1,417,000
501          8.50  1,509,000
502          8.75  1,555,000
503          9.00  1,656,000
504          9.25  1,760,000
505          9.50  1,809,000
506          9.75  1,912,000
507          10.00 2,021,000
508
509 *****

```



## Appendix D

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (4D) SHARP DEAL WITH 10.0% TAXABLE FINANCING, WITH 9% TAX CREDITS
5 DAVID CARTER
6
7 *****
```

```

118 *****
119
120 OPERATING ASSUMPTIONS:
121 *****
122 OPERATING EXPENSES PER UNIT          $4,000
123 LAUNDRY INCOME (NET) PER UNIT        $100
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR $275
125
126 FINANCING ASSUMPTIONS:
127 *****
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION 10.00%
129 (AS A % OF TOTAL DEVELOPMENT COST)
130
131 TAX ASSUMPTIONS:
132 *****
133 TAX CREDIT %                          9.00%
134
135
136 HOLDING PERIOD AFTER COMPLETION        10.0
137
138 *****

```

		SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:	28-Jul-88	*
		*****		*
		SHARP FUNDING (YES OR NO)	YES	*
		LIMITED DIVIDEND DISTRIBUTION	YES	*
		(YES OR NO)		*
		DIVIDEND DISTRIBUTION %	6.00%	*
				*
		LAND COST	\$1,600,000	*
		UNIT LAND COST	\$16,000	*
				*
		MINIMUM % AFFORDABLE UNITS	25.00%	*
				*
		SITE SIZE IN ACRES (NET OF ROADS)	20.0	*
		DENSITY (UNITS/ACRE)	5.0	*
		TOTAL UNITS IN DEVELOPMENT (CALC)	100	*
				*
		UNIT LAND COST/DENSITY TOGGLE	1	*
		(0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)		*

8	*****							*
9								*
10	DEVELOPMENT PLAN:					28-Jul-88		*
11	*****							*
12								*
13				PROJECTED	PROJECTED		*	
14			TOTAL	MONTHLY	ANNUAL	PROJECTED	*	
15		RENTABLE	# OF	RENT/	RENT/	1ST YEAR	*	
16	UNITS	SQ.FT.	UNITS	SQ.FT.	UNIT	UNIT	RENT ROLL	
17	----	-----	-----	-----	-----	-----	*	
18								*
19	TWO BEDROOM, LOW INCOME (A)	1,000	6	6,000	\$650	\$7,800	\$46,800	
20	TWO BEDROOM, LOW INCOME (B)	1,100	6	6,600	650	7,800	46,800	
21	TWO BEDROOM, MARKET (A)	1,000	30	30,000	1,000	12,000	360,000	
22	TWO BEDROOM, MARKET (B)	1,100	30	33,000	1,200	14,400	432,000	
23	THREE BEDROOM, LOW INCOME (A)	1,100	6	6,600	900	10,800	64,800	
24	THREE BEDROOM, LOW INCOME (B)	1,300	6	7,800	900	10,800	64,800	
25	THREE BEDROOM, MARKET (A)	1,100	8	8,800	1,150	13,800	110,400	
26	THREE BEDROOM, MARKET (B)	1,300	8	10,400	1,250	15,000	120,000	
27			----	-----			-----	
28	TOTALS		100	109,200			\$1,245,600	
29								*
30								*
31	"AVERAGE" LOW INCOME UNIT	1,125	24	27,000	775	9,300	223,200	
32	"AVERAGE" MARKET UNIT	1,082	76	82,200	1,121	13,453	1,022,400	
33			----	-----			-----	
34			100	109,200			\$1,245,600	
35								*
36	*****							*

37	*****					
38						
39	DEVELOPMENT COST ASSUMPTIONS:				28-Jul-88	
40	=====					
41						
42						
43		LINE	COST/		% OF	
44		ITEM	RENTABLE	COST/	TOTAL	
45		COSTS	SQ.FT.	UNIT	COSTS	
46		----	-----	-----	-----	
47						
48	LAND ACQUISITION	\$1,600,000	\$14.65	\$16,000	13.81%	
49						
50						
51	"HARD COSTS":					
52						
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.33	59,325	51.22%	
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.58	5,000	4.32%	
55		-----	-----	-----	-----	
56	TOTAL HARD COSTS	6,432,500	58.91	64,325	55.54%	
57						
58						
59	"SOFT" COSTS:					
60						
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.54%	
62	BOND PREMIUM (.004%)	25,730	0.24	257	0.22%	
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.30%	
64	CONSTRUCTION LOAN INTEREST	634,571	5.81	6,346	5.48%	
65	OAS APPLICATION FEE	8,211	0.08	82	0.07%	
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%	
67	INSPECTION FEE	41,053	0.38	411	0.35%	
68	LOAN POINTS	168,809	1.55	1,688	1.46%	
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%	
70	INSURANCE	100,000	0.92	1,000	0.86%	
71	LEGAL FEES	100,000	0.92	1,000	0.86%	
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%	
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%	
74	RENT-UP AND MARKETING	50,000	0.46	500	0.43%	
75	DEVELOPER'S FEE	1,592,054	14.58	15,921	13.75%	
76	DEVELOPER'S OVERHEAD	398,014	3.64	3,980	3.44%	
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.27%	
78		-----	-----	-----	-----	
79	TOTAL SOFT COSTS	3,549,487	32.50	35,495	30.65%	
80						
81						
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,581,987	\$106.06	\$115,820	100.00%	
83		=====	=====	=====	=====	
84	TOTAL CASH DEVELOPMENT COSTS	\$9,591,919				
85		=====				
86						
87	*****					



140																28 Jul 88
141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:															
142	*****															
143																
144	REVENUE GROWTH FACTOR: MARKET UNITS		6.02													
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS		5.02													
146	EXPENSE GROWTH FACTOR		5.02													
147																
148																
149																
150																
151	POTENTIAL REVENUES:															
152	LOW INCOME UNITS	9223,200	9234,360	9246,078	9258,382	9271,301	9284,066	9299,109	9314,065	9329,768	9346,256	9363,569	9381,748	9400,835	9420,877	9441,921
153	MARKET UNITS	1,022,400	1,083,744	1,148,769	1,217,695	1,290,756	1,368,202	1,450,294	1,537,312	1,629,550	1,727,323	1,830,963	1,940,820	2,057,770	2,180,706	2,311,548
154																
155	TOTAL POTENTIAL REVENUES	1,245,600	1,318,104	1,394,847	1,476,077	1,562,057	1,653,068	1,749,403	1,851,376	1,959,318	2,073,580	2,194,532	2,322,568	2,458,105	2,601,583	2,753,469
156																
157	LESS VACANCY & SI	62,280	65,905	69,742	73,804	78,193	82,653	87,470	92,569	97,966	103,679	109,727	116,128	122,905	130,079	137,673
158	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,938	16,895	17,908	18,983	20,122	21,329	22,609
159																
160	EFFECTIVE GROSS INCOME	1,193,320	1,262,799	1,336,340	1,414,183	1,496,579	1,583,797	1,676,118	1,773,844	1,877,291	1,986,796	2,102,714	2,225,423	2,355,322	2,492,833	2,638,405
161																
162	LESS OPERATING EXPENSES	372,500	391,125	410,681	431,215	452,776	475,415	499,186	524,145	550,352	577,870	606,763	637,101	668,956	702,404	737,525
163	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,835	33,426	35,090	36,853	38,695	40,630	42,662	44,795	47,034	49,386	51,855	54,448
164																
165	NET OPERATING INCOME	793,320	842,799	895,340	951,133	1,010,377	1,073,284	1,140,000	1,211,004	1,286,309	1,366,264	1,451,156	1,541,287	1,636,979	1,738,573	1,846,432
166																
167	LESS DEBT SERVICE:															
168	INTEREST	906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	824,630	811,030	796,001	779,394	761,043
169	PRINCIPAL	47,726	52,737	58,274	64,393	71,155	78,626	86,882	96,004	106,085	117,223	129,532	143,133	158,162	174,769	193,119
170																
171	CASH FLOW (DEFICIT) FROM OPERATIONS	(160,842)	(111,363)	(58,822)	(43,029)	(56,215)	(119,122)	(185,918)	(256,841)	(332,146)	(412,102)	(496,994)	(587,125)	(682,817)	(784,411)	(892,270)
172	FUNDING REQUIRED FOR DEBT COVERAGE (1.1 YR)	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	0
173																
174	SOURCES OF FUNDING:															
175	MAXIMUM SHARP OUTLAY (PER MHFA)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
176	SHARP FUNDS ADVANCED	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0	0	0	0
177	REQUIRED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	0	0	0	56,215	119,122	185,918	256,841	332,146	412,102	496,994	587,125	682,817	784,411	892,270
179	PERMITTED CASH DISTRIBUTIONS TO DEV.	90	90	90	90	56,215	119,122	185,918	256,841	332,146	412,102	496,994	587,125	682,817	784,411	892,270
180																
181	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	1.10	1.00	1.00	1.00	1.06	1.12	1.19	1.27	1.35	1.43	1.52	1.62	1.72	1.82	1.94
182																
183	*****															
184	*****															
185	*****															
186	*****															
187	*****															
188	*****															
189	*****															
190	ANALYSIS OF SHARP FUNDING & REPAYMENT:															
191	*****															
192		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
193		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
194		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
195	SHARP FUNDS ADVANCED	1256,258	1111,363	158,822	83,029	90	90	90	90	90	90	90	90	90	90	90
196	INTEREST P SI	6,406	15,917	20,960	23,563	24,816	26,057	27,360	28,728	26,942	21,302	11,381	0	0	0	0
197	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	64,448	139,753	219,708	239,004	0	0	0	0
198	OUTSTANDING BALANCE	262,665	389,946	469,735	496,377	521,144	547,201	574,561	538,841	426,030	227,623	0	0	0	0	0
199	ANNUAL NON-DISTRIBUTED PROJECT CASH FLOW	0	0	0	0	0	0	0	0	0	0	65,596	394,731	490,423	592,017	699,876
200	CUMULATIVE NON-DISTRIBUTED CASH FLOW	0	0	0	0	0	0	0	0	0	0	65,596	460,327	950,750	1,542,768	2,242,644
201																
202	*****															

203	*****						
204							
205	ANALYSIS OF PROJECT DEBT SERVICE:					28-Jul-88	
206	=====						
207							
208							
209							
210							
211	MORTGAGE PRINCIPAL	\$8,632,727					
212	INTEREST RATE	10.00%					
213	MHFA ADMINISTRATIVE FEE	0.50%					
214	TERM	30					
215	ANNUAL PAYMENT	\$954,162					
216	ANNUAL PAYMENT CONSTANT	10.17%					
217				INTEREST			
218		YEAR	BEG. BAL.	PAYMENT	& FEES	AMORT'N	END. BAL.
219		----	-----	-----	-----	-----	-----
220							
221		1	\$8,632,727	\$954,162	\$906,436	\$47,726	\$8,585,001
222		2	8,585,001	954,162	901,425	52,737	8,532,264
223		3	8,532,264	954,162	895,888	58,274	8,473,990
224		4	8,473,990	954,162	889,769	64,393	8,409,597
225		5	8,409,597	954,162	883,008	71,155	8,338,442
226		6	8,338,442	954,162	875,536	78,626	8,259,816
227		7	8,259,816	954,162	867,281	86,882	8,172,935
228		8	8,172,935	954,162	858,158	96,004	8,076,930
229		9	8,076,930	954,162	848,078	106,085	7,970,846
230		10	7,970,846	954,162	836,939	117,223	7,853,623
231		11	7,853,623	954,162	824,630	129,532	7,724,091
232		12	7,724,091	954,162	811,030	143,133	7,580,958
233		13	7,580,958	954,162	796,001	158,162	7,422,796
234		14	7,422,796	954,162	779,394	174,769	7,248,028
235		15	7,248,028	954,162	761,043	193,119	7,054,908
236		16	7,054,908	954,162	740,765	213,397	6,841,511
237		17	6,841,511	954,162	718,359	235,804	6,605,708
238		18	6,605,708	954,162	693,599	260,563	6,345,145
239		19	6,345,145	954,162	666,240	287,922	6,057,223
240		20	6,057,223	954,162	636,008	318,154	5,739,069
241		21	5,739,069	954,162	602,602	351,560	5,387,509
242		22	5,387,509	954,162	565,688	388,474	4,999,035
243		23	4,999,035	954,162	524,899	429,264	4,569,772
244		24	4,569,772	954,162	479,826	474,336	4,095,436
245		25	4,095,436	954,162	430,021	524,142	3,571,294
246		26	3,571,294	954,162	374,986	579,176	2,992,118
247		27	2,992,118	954,162	314,172	639,990	2,352,128
248		28	2,352,128	954,162	246,973	707,189	1,644,939
249		29	1,644,939	954,162	172,719	781,444	863,495
250		30	863,495	954,162	90,667	863,495	(0)
251							
252							
253	*****						

254																
255																
256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):															
257	*****															
258																
259																
260	EFFECTIVE TAX RATE	20.00%	1-CONSTRUCTION-1		INVESTMENT YEARS					INVESTMENT YEARS						
261																
262		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
263		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
264																
265																
266	NET OPERATING INCOME	90	90	90	9793,320	9842,799	9895,340	9951,133	91,010,377	91,073,284	91,140,080	91,211,004	91,286,309	91,366,264	91,451,156	91,541,287
267																
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034
269	LESS MORTGAGE INTEREST & FEES	0	0	0	906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	824,630	811,830
270	LESS DEPRECIATION	0	0	0	298,950	298,950	298,950	298,950	298,950	298,950	298,950	298,950	298,950	298,950	298,950	298,950
271	LESS AMORTIZATION: MHA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272																
273	TAXABLE INCOME	0	0	0	(390,193)	(334,328)	(274,806)	(211,378)	(143,781)	(71,731)	5,075	86,964	174,284	267,410	366,743	472,715
274	TAX BENEFIT (LIABILITY)	0	0	0	109,254	93,612	76,946	59,186	40,259	20,085	(1,421)	(24,350)	(48,800)	(74,875)	(102,688)	(132,360)
275																
276	INVESTMENT TAX CREDITS	0	0	0	182,943	182,943	182,943	182,943	182,943	182,943	182,943	182,943	182,943	182,943	0	0
277																
278																
279	TOTAL TAX BENEFITS (LIABILITY)	90	90	90	9292,197	9276,555	9259,888	9242,128	9223,201	9203,027	9181,522	9158,593	9134,143	9108,868	9072,688	9032,360
280																
281																
282	*****															
283																
284																
285	PROFORMA ANALYSIS OF AFTER TAX CASH FLOWS:															
286	*****															
287																
288																
289																
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	1-CONSTRUCTION-1		INVESTMENT YEARS					INVESTMENT YEARS						
291																
292		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
293		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
294																
295																
296	CASH INVESTMENT	(91,600,000)	90	9640,808	90	90	90	90	90	90	90	90	90	90	90	90
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	0	0	0	0	56,215	119,122	185,918	192,394	192,394	192,394	0	0
298	TAX BENEFIT (LIABILITY)	0	0	0	292,197	276,555	259,888	242,128	223,201	202,027	181,522	158,593	134,143	108,868	0	0
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	4,789,804	0	0
300																
301																
302	TOTAL AFTER TAX CASH FLOWS	(91,600,000)	90	9640,808	9292,197	9276,555	9259,888	9242,128	9279,416	9322,149	9367,439	9350,986	9326,537	92,090,265	90	90
303																
304	AFTER TAX NET PRESENT VALUE	\$523,000														
305	AFTER TAX INTERNAL RATE OF RETURN	22.4%														
306																
307																
308	*****															



309	*****			
310				*
311	ANALYSIS OF NET SALES PROCEEDS:	29-Jul-88		*
312	*****			*
313				*
314				*
315				*
316				*
317	GROSS SALES PRICE*	\$15,180,714		*
318				*
319	LESS COMMISSION @ 3%	455,421		*
320	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0		*
321		-----		*
322	NET SALES PRICE	14,725,293		*
323				*
324	LESS ADJUSTED BASIS:			*
325	COST BASIS	9,989,333		*
326	PLUS: APPLICATION OF RESERVE	345,892		*
327	LESS: DEPRECIATION	2,989,499		*
328	LESS: COST AMORTIZATION	56,270		*
329		-----		*
330		7,290,056		*
331		-----		*
332	TAXABLE GAIN ON SALE	7,435,237		*
333				*
334	TAX LIABILITY	\$2,081,866		*
335		=====		*
336				*
337				*
338	-----			*
339				*
340				*
341	GROSS SALES PRICE*	\$15,180,714		*
342				*
343	LESS COMMISSION @ 3%	455,421		*
344	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0		*
345		-----		*
346	NET SALES PRICE	14,725,293		*
347				*
348	LESS TAX LIABILITY	2,081,866		*
349	LESS OUTSTANDING DEBT:			*
350	FIRST MORTGAGE LOAN	7,853,623		*
351	SHARP LOAN	0		*
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)	0		*
353		-----		*
354				*
355	NET SALES PROCEEDS	\$4,789,804		*
356		=====		*
357	* NET OPERATING INCOME CAPITALIZED @ 9.0%			*
358				*
359	*****			*

360																
361																
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:															28-Jul-88
363																
364																
365																
366																
367		1-CONSTRUCTION-			INVESTMENT YEARS					INVESTMENT YEARS						
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
370	SOURCES OF CASH:															
371																
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MHA MORTGAGE FINANCING	0	4,316,364	4,316,364	0	0	0	0	0	0	0	0	0	0	0	0
374	SHARP FUNDING	0	0	0	256,258	111,363	58,822	3,029	0	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	793,320	842,799	895,340	951,133	1,010,377	1,073,284	1,140,080	1,211,004	1,286,309	1,366,264	0	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	14,725,293	0	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
379																
380																
381	TOTAL SOURCES OF CASH	\$1,600,000	\$4,316,364	\$4,316,364	\$1,049,578	\$954,162	\$954,162	\$954,162	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$16,091,557	\$0	\$0
382																
383																
384	USES OF CASH:															
385																
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAIN	0	4,316,364	4,316,364	0	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST & FEES: MHA MORTGAGE	0	0	0	906,436	901,425	895,888	889,769	883,008	875,536	867,281	858,158	848,078	836,939	0	0
389	AMORTIZATION: MHA MORTGAGE	0	0	0	47,726	52,737	58,274	64,393	71,155	78,626	86,882	96,004	106,085	7,970,846	0	0
390	MHA REQUIRED DEBT SERVICE RESERVE	0	0	0	95,416	0	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHARP FUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	64,448	139,753	219,708	0	0
393	"LIMITED DIVIDEND" DISTRIBUTIONS	0	0	0	0	0	0	0	0	0	0	0	0	2,081,866	0	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	0	56,215	119,122	185,918	192,394	192,394	4,982,197	0	0
395																
396																
397	TOTAL USES OF CASH	\$1,600,000	\$4,316,364	\$4,316,364	\$1,049,578	\$954,162	\$954,162	\$954,162	\$1,010,377	\$1,073,284	\$1,140,080	\$1,211,004	\$1,286,309	\$16,091,557	\$0	\$0
398																
399																
400																

```

401 *****
402
403 BREAK-EVEN TIME DELAY ANALYSIS:                28-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T                $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                  0
411
412 AFTER-TAX NET PRESENT VALUE ("AT" $523,000
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      DELAYED      "ATNPV"      VALUE OF
418           -----      -----      -----      -----
419
420           0      $523,000      $0      $523,000
421           1      495,000      0      495,000
422           2      467,000      0      467,000
423           3      439,000      0      439,000
424           4      412,000      0      412,000
425           5      385,000      0      385,000
426           6      358,000      0      358,000
427           7      332,000      0      332,000
428           8      306,000      0      306,000
429           9      281,000      0      281,000
430          10      256,000      0      256,000
431          11      231,000      0      231,000
432          12      207,000      0      207,000
433          13      183,000      0      183,000
434          14      159,000      0      159,000
435          15      135,000      0      135,000
436          16      112,000      0      112,000
437          17       89,000      0       89,000
438          18       67,000      0       67,000
439          19       44,000      0       44,000
440          20       23,000      0       23,000
441          21        1,000      0        1,000
442          22      (21,000)      0      (21,000)
443          23      (42,000)      0      (42,000)
444          24      (62,000)      0      (62,000)
445
446 *****

```

```

447 *****
448
449 SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS
450 =====
451                                     28-Jul-88
452                                     UNIT LAND COSTS
453      +ATNPV      $0      $4,000      $8,000      $12,000      $16,000      $20,000      $24,000
454      0.00%      166,000      (65,000)      (296,000)      (527,000)      (758,000)      (988,000)      (1,219,000)
455      1.00%      356,000      125,000      (105,000)      (336,000)      (567,000)      (798,000)      (1,029,000)
456      2.00%      553,000      314,000      94,000      (131,000)      (362,000)      (593,000)      (824,000)
457      ANNUAL      3.00%      772,000      512,000      278,000      56,000      (163,000)      (381,000)      (603,000)
458      REVENUE      4.00%      974,000      739,000      518,000      275,000      39,000      (188,000)      (407,000)
459      GROWTH      5.00%      1,195,000      950,000      713,000      528,000      303,000      65,000      (170,000)
460      FACTOR      6.00%      1,422,000      1,183,000      948,000      716,000      523,000      350,000      112,000
461      ("MARKET" UNITS) 7.00%      1,660,000      1,425,000      1,194,000      961,000      735,000      523,000      363,000
462      8.00%      1,909,000      1,681,000      1,448,000      1,223,000      995,000      770,000      547,000
463      9.00%      2,175,000      1,948,000      1,719,000      1,494,000      1,269,000      1,046,000      821,000
464      10.00%      2,459,000      2,232,000      2,005,000      1,784,000      1,559,000      1,337,000      1,116,000
465
466 *****

```

```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE   NPV
473          -----
474
475          2.00  ($503,000)
476          2.25  (430,000)
477          2.50  (321,000)
478          2.75  (240,000)
479          3.00  (161,000)
480          3.25  (50,000)
481          3.50   30,000
482          3.75  121,000
483          4.00  221,000
484          4.25  313,000
485          4.50  372,000
486          4.75  419,000
487          5.00  523,000
488          5.25  572,000
489          5.50  642,000
490          5.75  744,000
491          6.00  817,000
492          6.25  901,000
493          6.50  994,000
494          6.75 1,078,000
495          7.00 1,154,000
496          7.25 1,254,000
497          7.50 1,330,000
498          7.75 1,414,000
499          8.00 1,505,000
500          8.25 1,590,000
501          8.50 1,670,000
502          8.75 1,756,000
503          9.00 1,847,000
504          9.25 1,933,000
505          9.50 2,011,000
506          9.75 2,109,000
507          10.00 2,188,000
508
509 *****

```

## Appendix E

1	*****	
2		*
3	AFFORDABLE HOUSING ANALYSIS	28-Jul-88 *
4	(3A) TELLER DEAL WITH TAX-EXEMPT FINANCING @ 8.5%, WITHOUT TAX CREDITS	*
5	DAVID CARTER	*
6		*
7	*****	

```

118 *****
119
120 OPERATING ASSUMPTIONS:                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:      28-Jul-88
121 =====                                =====
122 OPERATING EXPENSES PER UNIT             $4,000      SHARP FUNDING (YES OR NO)                NO
123 LAUNDRY INCOME (NET) PER UNIT          $100        LIMITED DIVIDEND DISTRIBUTION            YES
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR $275        (YES OR NO)
125                                           DIVIDEND DISTRIBUTION %                  10.00%
126 FINANCING ASSUMPTIONS:
127 =====
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%      LAND COST                                $1,600,000
129 (AS A % OF TOTAL DEVELOPMENT COST)      UNIT LAND COST                                $16,000
130                                           MINIMUM % AFFORDABLE UNITS                20.00%
131 TAX ASSUMPTIONS:
132 =====
133 TAX CREDIT %                            0.00%      SITE SIZE IN ACRES (NET OF ROADS)        20.0
134                                           DENSITY (UNITS/ACRE)                      5.0
135                                           TOTAL UNITS IN DEVELOPMENT (CALC)         100
136 HOLDING PERIOD AFTER COMPLETION          10.0        UNIT LAND COST/DENSITY TOGGLE            1
137                                           (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```





27	*****				
28					
29	DEVELOPMENT COST ASSUMPTIONS:				29-Jul-88
40	=====				
41					
42					
43		LINE	COST/		% OF
44		ITEM	RENTABLE	COST/	TOTAL
45		COSTS	SQ.FT.	UNIT	COSTS
46		-----	-----	-----	-----
47					
48	LAND ACQUISITION	\$1,600,000	\$14.61	\$16,000	13.95%
49					
50					
51	"HARD COSTS":				
52					
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.18	59,325	51.73%
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.57	5,000	4.36%
55		-----	-----	-----	-----
56	TOTAL HARD COSTS	6,432,500	58.74	64,325	56.09%
57					
58					
59	"SOFT" COSTS:				
60					
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,790	1.55%
62	BOND PREMIUM (.004%)	25,730	0.23	257	0.22%
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.31%
64	CONSTRUCTION LOAN INTEREST	551,185	5.03	5,512	4.81%
65	OAS APPLICATION FEE	0	0.00	0	0.00%
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%
67	INSPECTION FEE	41,053	0.37	411	0.36%
68	LOAN POINTS	168,809	1.54	1,688	1.47%
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%
70	INSURANCE	100,000	0.91	1,000	0.87%
71	LEGAL FEES	100,000	0.91	1,000	0.87%
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%
74	RENT-UP AND MARKETING	50,000	0.46	500	0.44%
75	DEVELOPER'S FEE	1,573,735	14.37	15,737	13.72%
76	DEVELOPER'S OVERHEAD	393,434	3.59	3,934	3.43%
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.28%
78		-----	-----	-----	-----
79	TOTAL SOFT COSTS	3,434,391	31.37	34,350	29.95%
80					
81					
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,467,491	\$104.73	\$114,675	100.00%
83		=====	=====	=====	=====
84	TOTAL CASH DEVELOPMENT COSTS	\$9,500,322			
85		=====			
86					
87	*****				

98	*****					
99						
90	DEVELOPMENT COST ASSUMPTIONS: ESTIMATED BREAKDOWN OF RESIDENTIAL CONSTRUCTION COSTS				28-Jul-88	
91	-----					
92						
93						
94						
95					% OF	
96		LINE	COST/		TOTAL	
97		ITEM	RENTABLE	COST/	"HARD"	
98		COSTS	SQ.FT.	UNIT	COSTS	
99		-----	-----	-----	-----	
100						
101						
102	RESIDENTIAL CONSTRUCTION COSTS:					
103						
104	SITE PREPARATION AND IMPROVEMENTS	\$200,000	\$1.83	\$2,000	3.37%	
105	SUBGRADE	1,000,000	9.13	10,000	16.86%	
106	FRAMING	1,400,000	12.79	14,000	23.60%	
107	ENCLOSURE	700,000	6.39	7,000	11.80%	
108	INTERIOR FINISHINGS & FITTINGS	1,200,000	11.87	12,000	21.91%	
109	MECHANICAL/ELECTRICAL/PLUMBING	1,000,000	9.13	10,000	16.86%	
110	OTHER MISCELLANEOUS	50,000	0.46	500	0.84%	
111	CONTINGENCY @ 5%	282,500	2.58	2,825	4.76%	
112		-----	-----	-----	-----	
113						
114	TOTAL RESIDENTIAL CONSTRUCTION COSTS	\$5,932,500	\$54.18	\$59,325	100.00%	
115		=====	=====	=====	=====	
116						
117	*****					

141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:															28-Jul-88
142																
143																
144	REVENUE GROWTH FACTOR: MARKET UNITS	6.0%														
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS	5.0%														
146	EXPENSE GROWTH FACTOR	5.0%														
147																
148		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
149		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
150		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
151	POTENTIAL REVENUES:															
152	LOW INCOME UNITS	\$186,000	\$195,300	\$205,065	\$215,318	\$226,084	\$237,388	\$249,258	\$261,721	\$274,807	\$288,547	\$302,974	\$318,123	\$334,029	\$350,731	
153	MARKET UNITS	1,080,000	1,144,800	1,213,408	1,286,297	1,363,475	1,445,284	1,532,001	1,623,921	1,721,356	1,824,637	1,934,116	2,050,162	2,173,172	2,303,563	
154		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
155	TOTAL POTENTIAL REVENUES	1,266,000	1,340,100	1,418,553	1,501,616	1,589,559	1,682,672	1,781,258	1,885,641	1,996,162	2,113,184	2,237,093	2,368,286	2,507,201	2,654,293	
156		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
157	LESS VACANCY & SE	63,300	67,005	70,928	75,081	79,478	84,134	89,063	94,282	99,808	105,659	111,854	118,414	125,360	132,715	
158	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,928	16,895	17,908	18,983	20,122	21,329	
159		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
160	EFFECTIVE GROSS INCOME	1,212,700	1,283,695	1,358,861	1,438,445	1,522,706	1,611,921	1,706,381	1,806,396	1,912,293	2,024,420	2,143,144	2,268,854	2,401,963	2,542,908	
161		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
162	LESS OPERATING EXPENSES	372,500	391,125	410,681	431,215	452,776	475,415	499,186	524,145	550,352	577,870	606,763	637,101	668,956	702,404	
163	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,031	49,386	51,855	
164		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
165	NET OPERATING INCOME	812,700	863,695	917,861	975,395	1,036,504	1,101,408	1,170,342	1,243,555	1,321,311	1,403,889	1,491,586	1,584,713	1,682,621	1,788,648	
166		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
167	LESS DEBT SERVICE:															
168	INTEREST	769,526	763,881	757,727	751,020	743,708	735,739	727,053	717,585	707,315	696,016	683,754	670,389	655,821	639,942	
169	PRINCIPAL	62,728	68,373	74,527	81,234	88,546	96,515	105,201	114,669	124,989	136,228	148,500	161,865	176,423	192,312	
170		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
171	CASH FLOW (DEFICIT) FROM OPERATIONS	(619,554)	\$21,441	\$85,607	\$143,141	\$204,250	\$269,154	\$338,088	\$411,301	\$489,057	\$571,625	\$659,332	\$752,464	\$851,367	\$956,394	
172	FUNDING REQUIRED FOR DEBT COVERAGE (1.1 YR)	102,779	0	0	0	0	0	0	0	0	0	0	0	0	0	
173		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
174	SOURCES OF FUNDING:															
175	MAXIMUM SHARP OUTLAY (PER MHA)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
176	SHARP FUNDS ADVANCED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
177	REQUIRED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
178	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	31,441	85,607	143,141	204,250	269,154	338,088	411,301	489,057	571,625	659,332	752,464	851,367	956,394	
179	PERMITTED CASH DISTRIBUTIONS TO DEV.	0	31,441	85,607	143,141	204,250	269,154	338,088	411,301	489,057	571,625	659,332	752,464	851,367	956,394	
180		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
181	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	0.90	1.04	1.10	1.17	1.25	1.32	1.41	1.49	1.58	1.69	1.79	1.90	2.02	2.15	
182		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
183																
184																
185																
186																
187																
188																
189																
190	ANALYSIS OF SHARP FUNDING & REPAYMENT:															28-Jul-88
191		YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
192		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
193		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
194		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
195	SHARP FUNDS ADVANCED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
196	INTEREST & SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
197	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
198	OUTSTANDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
199	ANNUAL NON-DISTRIBUTED PROJECT CASH FLOW	0	0	0	48,138	109,246	174,151	243,085	316,298	394,054	476,631	564,329	657,461	756,364	861,391	
200	CUMULATIVE NON-DISTRIBUTED CASH FLOW	0	0	0	48,138	157,384	331,535	574,620	890,918	1,284,972	1,761,603	2,325,932	2,983,393	3,739,757	4,601,148	
201		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
202																



255	28 Jul 88																
256 PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):																	
257																	
258																	
259																	
260 EFFECTIVE TAX RATE	20.00%	CONSTRUCTION:		INVESTMENT YEARS							INVESTMENT YEARS						
261	TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
262	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
263	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
264	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
265	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
266 NET OPERATING INCOME	\$0	\$0	\$0	\$812,700	\$863,695	\$917,861	\$975,395	\$1,036,504	\$1,101,408	\$1,170,342	\$1,242,555	\$1,322,311	\$1,406,889	\$1,491,586	\$1,586,713	\$1,683,621	
267	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
268 PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,024	49,386	
269 LESS MORTGAGE INTEREST & FEES	0	0	0	769,526	763,881	757,727	751,020	743,708	735,739	727,053	717,585	707,265	696,116	683,754	670,389	655,821	
270 LESS DEPRECIATION	0	0	0	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	
271 LESS AMORTIZATION: MWA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	
272	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
273 TAXABLE INCOME	0	0	0	(230,406)	(172,390)	(110,626)	(44,870)	25,142	99,687	179,062	263,586	352,597	449,455	551,547	660,284	776,106	
274 TAX BENEFIT (LIABILITY)	0	0	0	64,514	48,269	30,975	12,563	(7,040)	(27,912)	(50,137)	(73,804)	(99,007)	(125,847)	(154,423)	(184,880)	(217,210)	
275	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
276 INVESTMENT TAX CREDITS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
277	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
278	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
279 TOTAL TAX BENEFITS (LIABILITY)	\$0	\$0	\$0	\$64,514	\$48,269	\$30,975	\$12,563	\$(7,040)	\$(27,912)	\$(50,137)	\$(73,804)	\$(99,007)	\$(125,847)	\$(154,423)	\$(184,880)	\$(217,210)	
280	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
281																	
282																	
283																	
284																	
285 PROFORMA ANALYSIS OF AFTER-TAX CASH FLOWS:																	
286																	
287																	
288																	
289																	
290 REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	CONSTRUCTION:		INVESTMENT YEARS							INVESTMENT YEARS						
291	TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
292	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
293	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
294	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
295	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
296 CASH INVESTMENT	(\$1,600,000)	\$0	\$649,968	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
297 CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	(19,554)	31,441	85,607	142,141	204,250	269,154	338,111	409,057	481,625	551,625	618,000	680,000	737,000	
298 TAX BENEFIT (LIABILITY)	0	0	0	64,514	48,269	30,975	12,563	(7,040)	(27,912)	(50,137)	(73,804)	(99,007)	(125,847)	(154,423)	(184,880)	(217,210)	
299 NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
300	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
301	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
302 TOTAL AFTER-TAX CASH FLOWS	(\$1,600,000)	\$0	\$649,968	\$44,960	\$79,710	\$116,582	\$155,704	\$197,210	\$241,242	\$287,951	\$337,497	\$390,050	\$445,808	\$503,577	\$563,120	\$624,790	
303	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
304 AFTER TAX NET PRESENT VALUE	\$488,000																
305 AFTER TAX INTERNAL RATE OF RETURN	21.3%																
306	----																
307																	
308																	

309	*****		
310			
311	ANALYSIS OF NET SALES PROCEEDS:	28-Jul-98	
312	*****		
313			
314			
315			
316			
317	GROSS SALES PRICE*	\$15,598,762	
318			
319	LESS COMMISSION @ 3%	467,963	
320	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	
321		-----	
322	NET SALES PRICE	15,130,799	
323			
324	LESS ADJUSTED BASIS:		
325	COST BASIS	9,893,756	
326	PLUS: APPLICATION OF RESERVE	345,892	
327	LESS: DEPRECIATION	2,954,526	
328	LESS: COST AMORTIZATION	56,270	
329		-----	
330		7,228,852	
331		-----	
332	TAXABLE GAIN ON SALE	7,901,947	
333			
334	TAX LIABILITY	\$2,212,545	
335		=====	
336			
337			
338	-----		
339			
340			
341	GROSS SALES PRICE*	\$15,598,762	
342			
343	LESS COMMISSION @ 3%	467,963	
344	LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%	0	
345		-----	
346	NET SALES PRICE	15,130,799	
347			
348	LESS TAX LIABILITY	2,212,545	
349	LESS OUTSTANDING DEBT:		
350	FIRST MORTGAGE LOAN	7,597,269	
351	SHARP LOAN	0	
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)	1,886,521	
353		-----	
354			
355	NET SALES PROCEEDS	\$7,207,506	
356		=====	
357	* * NET OPERATING INCOME CAPITALIZED @ 9.0%		
358			
359	*****		



```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:          28-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T        $0
409
410 PROFORMA TIME DELAY (IN MONTHS)          0
411
412 AFTER-TAX NET PRESENT VALUE ("AT" $488,000
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      DELAYED      "ATNPV"      VALUE OF
418           -----      -----      -----      -----
419
420                0  $488,000          0  $488,000
421                1  460,000          0  460,000
422                2  432,000          0  432,000
423                3  405,000          0  405,000
424                4  378,000          0  378,000
425                5  352,000          0  352,000
426                6  326,000          0  326,000
427                7  300,000          0  300,000
428                8  275,000          0  275,000
429                9  250,000          0  250,000
430               10  225,000          0  225,000
431               11  201,000          0  201,000
432               12  177,000          0  177,000
433               13  153,000          0  153,000
434               14  130,000          0  130,000
435               15  107,000          0  107,000
436               16   84,000          0   84,000
437               17   61,000          0   61,000
438               18   39,000          0   39,000
439               19   17,000          0   17,000
440               20   (4,000)          0  (4,000)
441               21  (26,000)          0  (26,000)
442               22  (47,000)          0  (47,000)
443               23  (67,000)          0  (67,000)
444               24  (88,000)          0  (88,000)
445
446 *****

```



```

447 *****
448
449 SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS
450 =====
451                                     UNIT LAND COSTS
452                                +ATNPV      $0      $4,000      $8,000      $12,000      $16,000      $20,000      $24,000
453                                0.00% (100,000) (365,000) (622,000) (878,000) (1,134,000) (1,390,000) (1,646,000)
454                                1.00% 126,000 (175,000) (431,000) (688,000) (944,000) (1,200,000) (1,456,000)
455                                2.00% 408,000 95,000 (208,000) (464,000) (721,000) (977,000) (1,233,000)
456 ANNUAL 3.00% 707,000 395,000 95,000 (212,000) (468,000) (725,000) (982,000)
457 REVENUE 4.00% 1,026,000 714,000 403,000 99,000 (197,000) (455,000) (712,000)
458 GROWTH 5.00% 1,364,000 1,052,000 740,000 434,000 133,000 (162,000) (452,000)
459 FACTOR 6.00% 1,724,000 1,412,000 1,100,000 792,000 488,000 188,000 (106,000)
460 ("MARKET" UNITS) 7.00% 2,106,000 1,794,000 1,482,000 1,172,000 867,000 565,000 266,000
461 8.00% 2,513,000 2,200,000 1,889,000 1,577,000 1,271,000 966,000 667,000
462 9.00% 2,944,000 2,632,000 2,320,000 2,008,000 1,701,000 1,395,000 1,093,000
463 10.00% 3,402,000 3,090,000 2,778,000 2,466,000 2,157,000 1,852,000 1,546,000
464
465 *****

```

```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE    NPV
473          -----  -----
474
475          2.00  ($793,000)
476          2.25  (665,000)
477          2.50  (543,000)
478          2.75  (402,000)
479          3.00  (397,000)
480          3.25  (252,000)
481          3.50  (119,000)
482          3.75    32,000
483          4.00    37,000
484          4.25   189,000
485          4.50   329,000
486          4.75   483,000
487          5.00   488,000
488          5.25   644,000
489          5.50   787,000
490          5.75   945,000
491          6.00   949,000
492          6.25  1,107,000
493          6.50  1,252,000
494          6.75  1,413,000
495          7.00  1,416,000
496          7.25  1,577,000
497          7.50  1,722,000
498          7.75  1,882,000
499          8.00  1,886,000
500          8.25  2,047,000
501          8.50  2,192,000
502          8.75  2,353,000
503          9.00  2,356,000
504          9.25  2,517,000
505          9.50  2,662,000
506          9.75  2,823,000
507          10.00 2,826,000
508
509 *****

```

## Appendix F

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (3B) TELLER DEAL WITH TAX-EXEMPT FINANCING @ 8.5%, WITH 4% TAX CREDITS
5 DAVID CARTER
6
7 *****
```

```

118 *****
119
120 OPERATING ASSUMPTIONS:
121 =====
122 OPERATING EXPENSES PER UNIT          $4,000
123 LAUNDRY INCOME (NET) PER UNIT        $100
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR  $275
125
126 FINANCING ASSUMPTIONS:
127 =====
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%
129 (AS A % OF TOTAL DEVELOPMENT COST)
130
131 TAX ASSUMPTIONS:
132 =====
133 TAX CREDIT %                          4.00%
134
135
136 HOLDING PERIOD AFTER COMPLETION        10.0
137
138 *****

```

SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:		28-Jul-88	*
=====			*
SHARP FUNDING (YES OR NO)	NO		*
LIMITED DIVIDEND DISTRIBUTION	YES		*
(YES OR NO)			*
DIVIDEND DISTRIBUTION %	10.00%		*
			*
LAND COST	\$1,600,000		*
UNIT LAND COST	\$16,000		*
			*
MINIMUM % AFFORDABLE UNITS	20.00%		*
			*
SITE SIZE IN ACRES (NET OF ROADS)	20.0		*
DENSITY (UNITS/ACRE)	5.0		*
TOTAL UNITS IN DEVELOPMENT (CALC)	100		*
			*
UNIT LAND COST/DENSITY TOGGLE	1		*
(0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)			*

```

8 *****
9
10 DEVELOPMENT PLAN: 28-Jul-88
11 =====
12
13
14
15
16 UNITS
17 -----
18
19 TWO BEDROOM, LOW INCOME (A) 1,000 5 5,000 $650 $7,800 $39,000
20 TWO BEDROOM, LOW INCOME (B) 1,100 5 5,500 650 7,800 39,000
21 TWO BEDROOM, MARKET (A) 1,000 30 30,000 1,000 12,000 360,000
22 TWO BEDROOM, MARKET (B) 1,100 30 33,000 1,200 14,400 432,000
23 THREE BEDROOM, LOW INCOME (A) 1,100 5 5,500 900 10,800 54,000
24 THREE BEDROOM, LOW INCOME (B) 1,300 5 6,500 900 10,800 54,000
25 THREE BEDROOM, MARKET (A) 1,100 10 11,000 1,150 13,800 138,000
26 THREE BEDROOM, MARKET (B) 1,300 10 13,000 1,250 15,000 150,000
27 -----
28 TOTALS 100 109,500 $1,266,000
29
30
31 "AVERAGE" LOW INCOME UNIT 1,125 20 22,500 775 9,300 186,000
32 "AVERAGE" MARKET UNIT 1,088 80 87,000 1,125 13,500 1,080,000
33 -----
34 100 109,500 $1,266,000
35
36 *****

```

37	*****					
38						
39	DEVELOPMENT COST ASSUMPTIONS:				28-Jul-88	
40	*****					
41						
42						
43		LINE	COST/		% OF	
44		ITEM	RENTABLE	COST/	TOTAL	
45		COSTS	SQ.FT.	UNIT	COSTS	
46		----	-----	-----	-----	
47						
48	LAND ACQUISITION	\$1,600,000	\$14.61	\$16,000	13.95%	
49						
50						
51	"HARD COSTS":					
52						
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.18	59,325	51.73%	
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.57	5,000	4.36%	
55		-----	-----	-----	-----	
56	TOTAL HARD COSTS	6,432,500	58.74	64,325	56.09%	
57						
58						
59	"SOFT" COSTS:					
60						
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.55%	
62	BOND PREMIUM (.004%)	25,730	0.23	257	0.22%	
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.31%	
64	CONSTRUCTION LOAN INTEREST	551,185	5.03	5,512	4.81%	
65	DAS APPLICATION FEE	0	0.00	0	0.00%	
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%	
67	INSPECTION FEE	41,053	0.37	411	0.36%	
68	LOAN POINTS	168,809	1.54	1,688	1.47%	
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%	
70	INSURANCE	100,000	0.91	1,000	0.87%	
71	LEGAL FEES	100,000	0.91	1,000	0.87%	
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%	
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%	
74	RENT-UP AND MARKETING	50,000	0.46	500	0.44%	
75	DEVELOPER'S FEE	1,573,735	14.37	15,737	13.72%	
76	DEVELOPER'S OVERHEAD	393,434	3.59	3,934	3.43%	
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.28%	
78		-----	-----	-----	-----	
79	TOTAL SOFT COSTS	2,434,991	31.37	34,350	29.95%	
80						
81						
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,467,491	\$104.73	\$114,675	100.00%	
83		=====	=====	=====	=====	
84	TOTAL CASH DEVELOPMENT COSTS	\$9,500,322				
85		=====				
86						
87	*****					

88	*****					
89						
90	DEVELOPMENT COST ASSUMPTIONS: ESTIMATED BREAKDOWN OF RESIDENTIAL CONSTRUCTION COSTS				28-Jul-88	
91	=====					
92						
93						
94						
95						
96		LINE	COST/		% OF	
97		ITEM	RENTABLE	COST/	TOTAL	
98		COSTS	SQ.FT.	UNIT	"HARD"	
99		-----	-----	-----	COSTS	
100						
101						
102	RESIDENTIAL CONSTRUCTION COSTS:					
103						
104	SITE PREPARATION AND IMPROVEMENTS	\$200,000	\$1.83	\$2,000	3.37%	
105	SUBGRADE	1,000,000	9.13	10,000	16.86%	
106	FRAMING	1,400,000	12.79	14,000	23.60%	
107	ENCLOSURE	700,000	6.39	7,000	11.80%	
108	INTERIOR FINISHINGS & FITTINGS	1,300,000	11.87	13,000	21.91%	
109	MECHANICAL/ELECTRICAL/PLUMBING	1,000,000	9.13	10,000	16.86%	
110	OTHER MISCELLANEOUS	50,000	0.46	500	0.84%	
111	CONTINGENCY @ 5%	282,500	2.58	2,825	4.76%	
112		-----	-----	-----	-----	
113						
114	TOTAL RESIDENTIAL CONSTRUCTION COSTS	\$5,322,500	\$54.18	\$59,325	100.00%	
115		=====	=====	=====	=====	
116						
117	*****					





YEAR	BEG. BAL.	PAYMENT	INTEREST & FEES	AMORT'N	END. BAL.
1	\$8,550,290	\$832,254	\$769,526	\$62,728	\$8,487,562
2	8,487,562	832,254	763,881	68,373	8,419,189
3	8,419,189	832,254	757,727	74,527	8,344,662
4	8,344,662	832,254	751,020	81,234	8,263,427
5	8,263,427	832,254	743,708	88,546	8,174,882
6	8,174,882	832,254	735,739	96,515	8,078,367
7	8,078,367	832,254	727,053	105,201	7,973,166
8	7,973,166	832,254	717,585	114,669	7,858,497
9	7,858,497	832,254	707,265	124,989	7,733,507
10	7,733,507	832,254	696,016	136,238	7,597,269
11	7,597,269	832,254	683,754	148,500	7,448,769
12	7,448,769	832,254	670,389	161,865	7,286,904
13	7,286,904	832,254	655,821	176,433	7,110,472
14	7,110,472	832,254	639,942	192,312	6,918,160
15	6,918,160	832,254	622,634	209,620	6,708,540
16	6,708,540	832,254	603,769	228,485	6,480,055
17	6,480,055	832,254	583,205	249,049	6,231,006
18	6,231,006	832,254	560,791	271,463	5,959,543
19	5,959,543	832,254	536,359	295,895	5,663,647
20	5,663,647	832,254	509,728	322,526	5,341,122
21	5,341,122	832,254	480,701	351,553	4,989,568
22	4,989,568	832,254	449,061	383,193	4,606,376
23	4,606,376	832,254	414,574	417,580	4,188,695
24	4,188,695	832,254	376,983	455,271	3,733,424
25	3,733,424	832,254	336,008	496,246	3,237,178
26	3,237,178	832,254	291,346	540,908	2,696,270
27	2,696,270	832,254	242,664	589,590	2,106,680
28	2,106,680	832,254	189,601	642,653	1,464,027
29	1,464,027	832,254	131,762	700,492	763,536
30	763,536	832,254	68,718	763,536	0

256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):																28-Jul-88
257																	
258																	
259																	
260	EFFECTIVE TAX RATE	20.00%	1-CONSTRUCTION-1		INVESTMENT YEARS					INVESTMENT YEARS							
261																	
262		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
263		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
264		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
265																	
266	NET OPERATING INCOME	90	90	90	9812,700	1063,695	9917,061	9975,395	91,036,504	91,101,400	91,170,342	91,243,555	91,321,311	91,403,889	91,491,506	91,584,713	91,683,621
267																	
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,075	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386
269	LESS MORTGAGE INTEREST & FEES	0	0	0	769,526	763,001	757,727	751,070	743,708	735,739	727,053	717,505	707,265	696,016	683,754	670,389	655,821
270	LESS DEPRECIATION	0	0	0	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453	295,453
271	LESS AMORTIZATION: RWFA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272																	
273	TAXABLE INCOME	0	0	0	(230,406)	(172,290)	(110,626)	(44,070)	25,142	99,607	179,062	263,586	353,597	449,455	551,547	660,284	776,106
274	TAX BENEFIT (LIABILITY)	0	0	0	64,514	48,269	30,975	12,563	(7,040)	(27,912)	(50,137)	(73,804)	(99,007)	(125,847)	(154,433)	(184,880)	(217,310)
275																	
276	INVESTMENT TAX CREDITS	0	0	0	66,780	66,780	66,780	66,780	66,780	66,780	66,780	66,780	66,780	66,780	66,780	0	0
277																	
278																	
279	TOTAL TAX BENEFITS (LIABILITY)	90	90	90	9131,294	9115,050	997,756	979,344	959,741	938,868	916,643	(97,024)	(932,227)	(959,067)	(9154,433)	(9184,880)	(9217,310)
280																	
281																	
282																	
283																	
284																	
285	PROFORMA ANALYSIS OF AFTER-TAX CASH FLOWS:																28-Jul-88
286																	
287																	
288																	
289																	
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	1-CONSTRUCTION-1		INVESTMENT YEARS					INVESTMENT YEARS							
291																	
292		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
293		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
294		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
295																	
296	CASH INVESTMENT	(91,600,000)	90	9649,968	90	90	90	90	90	90	90	90	90	90	90	90	90
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	(19,554)	31,441	85,607	143,141	204,250	269,154	338,099	411,771	489,857	571,635	660,284	755,821	858,821
298	TAX BENEFIT (LIABILITY)	0	0	0	131,294	115,050	97,756	79,344	59,741	38,868	16,643	(7,024)	(32,227)	(59,067)	(91,543)	(124,880)	(167,310)
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300																	
301																	
302	TOTAL AFTER-TAX CASH FLOWS	(91,600,000)	90	9649,968	9111,740	9146,491	9183,363	9222,485	9263,990	9308,022	9354,731	9404,278	9456,830	9512,074	9570,284	9631,464	9695,871
303																	
304	AFTER TAX NET PRESENT VALUE	9709,000															
305	AFTER-TAX INTERNAL RATE OF RETURN	23.0%															
306		----															
307																	
308																	

```

309 *****
310
311 ANALYSIS OF NET SALES PROCEEDS:                28-Jul-88
312 *****
313
314
315
316
317 GROSS SALES PRICE*                               $15,598,762
318
319 LESS COMMISSION @ 3%                             467,963
320 LESS MMFA "APPRECIATION PARTICIPATION" @ 0.00% 0
321 -----
322 NET SALES PRICE                                  15,130,799
323
324 LESS ADJUSTED BASIS:
325 COST BASIS                                         9,893,756
326 PLUS: APPLICATION OF RESERVE                     345,892
327 LESS: DEPRECIATION                               2,954,526
328 LESS: COST AMORTIZATION                           56,270
329 -----
330                                              7,228,852
331 -----
332 TAXABLE GAIN ON SALE                             7,901,947
333
334 TAX LIABILITY                                     $2,212,545
335 -----
336
337
338 -----
339
340
341 GROSS SALES PRICE*                               $15,598,762
342
343 LESS COMMISSION @ 3%                             467,963
344 LESS MMFA "APPRECIATION PARTICIPATION" @ 0.00% 0
345 -----
346 NET SALES PRICE                                  15,130,799
347
348 LESS TAX LIABILITY                                2,212,545
349 LESS OUTSTANDING DEBT:
350 FIRST MORTGAGE LOAN                             7,597,269
351 SHARP LOAN                                         0
352 PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST) 1,886,521
353 -----
354
355 NET SALES PROCEEDS                                $7,207,506
356 -----
357 * NET OPERATING INCOME CAPITALIZED @ 9.0%
358
359 *****

```

360																	
361																	
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:																
363																	
364																	
365																	
366																	
367		1-CONSTRUCTION-			INVESTMENT YEARS					INVESTMENT YEARS							
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
370	SOURCES OF CASH:																
371																	
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$19,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MWA MORTGAGE FINANCING	0	4,275,145	4,275,145	0	0	0	0	0	0	0	0	0	0	0	0	0
374	SHARP FUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	812,700	863,695	917,861	975,395	1,036,504	1,101,408	1,170,342	1,243,555	1,321,311	1,403,889	0	0	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	4,092	13,725	29,695	52,881	84,261	124,918	0	0	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	15,130,799	0	0	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	1,886,521	0	0	0
379																	
380	TOTAL SOURCES OF CASH	\$1,600,000	\$4,275,145	\$4,275,145	\$832,254	\$863,695	\$917,861	\$975,395	\$1,040,595	\$1,115,133	\$1,200,037	\$1,296,437	\$1,405,572	\$18,546,128	\$0	\$0	\$0
381																	
382																	
383																	
384	USES OF CASH:																
385																	
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAW	0	4,275,145	4,275,145	0	0	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST & FEES: MWA MORTGAGE	0	0	0	769,526	763,881	757,727	751,020	743,708	735,739	727,053	717,585	707,265	696,016	0	0	0
389	AMORTIZATION: MWA MORTGAGE	0	0	0	62,728	68,373	74,527	81,234	88,546	96,515	105,201	114,669	124,989	7,733,507	0	0	0
390	MWA REQUIRED DEBT SERVICE RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHARP FUNDING	0	0	0	0	0	0	0	0	0	0	0	0	2,212,545	0	0	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
393	*LIMITED DIVIDEND* DISTRIBUTIONS	0	0	0	0	31,441	85,607	95,003	95,003	95,003	95,003	95,003	95,003	7,302,510	0	0	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	48,138	113,328	187,876	272,780	369,179	478,315	601,550	0	0	0
395																	
396	TOTAL USES OF CASH	\$1,600,000	\$4,275,145	\$4,275,145	\$832,254	\$863,695	\$917,861	\$975,395	\$1,040,595	\$1,115,133	\$1,200,037	\$1,296,437	\$1,405,572	\$18,546,128	\$0	\$0	\$0
397																	
398																	
399																	
400																	

28-Jul-88

```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:                28-Jul-88
404 *****
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T              $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                0
411
412 AFTER-TAX NET PRESENT VALUE ("AT $709,000
413
414
415
416           MONTHS OF      TIME-      BASELINE      PRESENT
417           TIME DELAY      DELAYED      "ATNPV"      VALUE OF
418           -----      -----      -----      -----
419
420           0      $709,000              $0      $709,000
421           1      678,000              0      678,000
422           2      648,000              0      648,000
423           3      618,000              0      618,000
424           4      588,000              0      588,000
425           5      559,000              0      559,000
426           6      530,000              0      530,000
427           7      502,000              0      502,000
428           8      474,000              0      474,000
429           9      446,000              0      446,000
430          10      419,000              0      419,000
431          11      392,000              0      392,000
432          12      365,000              0      365,000
433          13      339,000              0      339,000
434          14      313,000              0      313,000
435          15      287,000              0      287,000
436          16      262,000              0      262,000
437          17      237,000              0      237,000
438          18      213,000              0      213,000
439          19      189,000              0      189,000
440          20      165,000              0      165,000
441          21      141,000              0      141,000
442          22      118,000              0      118,000
443          23       95,000              0       95,000
444          24       72,000              0       72,000
445
446 *****

```



```

467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE    NPV
473          -----
474
475          2.00  ($685,000)
476          2.25  ($561,000)
477          2.50  ($441,000)
478          2.75  ($304,000)
479          3.00  ($251,000)
480          3.25  ($109,000)
481          3.50    22,000
482          3.75   171,000
483          4.00   220,000
484          4.25   370,000
485          4.50   508,000
486          4.75   661,000
487          5.00   709,000
488          5.25   863,000
489          5.50  1,005,000
490          5.75  1,162,000
491          6.00  1,208,000
492          6.25  1,364,000
493          6.50  1,508,000
494          6.75  1,668,000
495          7.00  1,712,000
496          7.25  1,872,000
497          7.50  2,016,000
498          7.75  2,176,000
499          8.00  2,220,000
500          8.25  2,380,000
501          8.50  2,525,000
502          8.75  2,684,000
503          9.00  2,728,000
504          9.25  2,888,000
505          9.50  3,033,000
506          9.75  3,192,000
507          10.00 3,236,000
508
509 *****

```

## Appendix G

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                                28-Jul-88
4 (2) MARKET DEAL WITH 9% TAX CREDITS
5 DAVID CARTER
6
7 *****
```



```

118 *****
119
120 OPERATING ASSUMPTIONS:                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:    28-Jul-88
121 *****                                *****
122 OPERATING EXPENSES PER UNIT            $4,000    SHARP FUNDING (YES OR NO)                    NO
123 LAUNDRY INCOME (NET) PER UNIT          $100    LIMITED DIVIDEND DISTRIBUTION                YES
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR $275    (YES OR NO)
125                                         DIVIDEND DISTRIBUTION %                      10.00%
126 FINANCING ASSUMPTIONS:
127 *****                                LAND COST                                    $1,600,000
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%    UNIT LAND COST                              $16,000
129 (AS A % OF TOTAL DEVELOPMENT COST)
130                                         MINIMUM % AFFORDABLE UNITS                  20.00%
131 TAX ASSUMPTIONS:
132 *****                                SITE SIZE IN ACRES (NET OF ROADS)           20.0
133 TAX CREDIT %                          9.00%    DENSITY (UNITS/ACRE)                       5.0
134                                         TOTAL UNITS IN DEVELOPMENT (CALC)           100
135
136 HOLDING PERIOD AFTER COMPLETION          10.0    UNIT LAND COST/DENSITY TOGGLE                1
137                                         (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```



37	*****				
38					
39	DEVELOPMENT COST ASSUMPTIONS:				28-Jul-88
40	=====				
41					
42					
43		LINE	COST/		% OF
44		ITEM	RENTABLE	COST/	TOTAL
45		COSTS	SQ.FT.	UNIT	COSTS
46		-----	-----	-----	-----
47					
48	LAND ACQUISITION	\$1,600,000	\$14.61	\$16,000	13.83%
49					
50					
51	"HARD COSTS":				
52					
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.18	59,325	51.27%
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.57	5,000	4.32%
55		-----	-----	-----	-----
56	TOTAL HARD COSTS	6,432,500	58.74	64,325	55.59%
57					
58					
59	"SOFT" COSTS:				
60					
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.54%
62	BOND PREMIUM (.004%)	25,730	0.23	257	0.22%
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.30%
64	CONSTRUCTION LOAN INTEREST	633,863	5.79	6,339	5.48%
65	GAS APPLICATION FEE	0	0.00	0	0.00%
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%
67	INSPECTION FEE	41,053	0.37	411	0.35%
68	LOAN POINTS	168,809	1.54	1,688	1.46%
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%
70	INSURANCE	100,000	0.91	1,000	0.86%
71	LEGAL FEES	100,000	0.91	1,000	0.86%
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%
74	RENT-UP AND MARKETING	50,000	0.46	500	0.43%
75	DEVELOPER'S FEE	1,590,270	14.52	15,903	13.74%
76	DEVELOPER'S OVERHEAD	397,568	3.63	3,976	3.44%
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.27%
78		-----	-----	-----	-----
79	TOTAL SOFT COSTS	3,538,338	32.31	35,383	30.58%
80					
81					
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,570,838	\$105.67	\$115,708	100.00%
83		=====	=====	=====	=====
84	TOTAL CASH DEVELOPMENT COSTS	\$9,583,000			
85		=====			
86					
87	*****				

98	*****					
99						
90	DEVELOPMENT COST ASSUMPTIONS: ESTIMATED BREAKDOWN OF RESIDENTIAL CONSTRUCTION COSTS				28-Jul-88	
91	*****					
92						
93						
94						
95						
96		LINE	COST/		% OF	
97		ITEM	RENTABLE	COST/	TOTAL	
98		COSTS	SQ.FT.	UNIT	"HARD"	
99		-----	-----	-----	COSTS	
100						
101						
102	RESIDENTIAL CONSTRUCTION COSTS:					
103						
104	SITE PREPARATION AND IMPROVEMENTS	\$200,000	\$1.83	\$2,000	3.37%	
105	SUBGRADE	1,000,000	9.13	10,000	16.86%	
106	FRAMING	1,400,000	12.79	14,000	23.60%	
107	ENCLOSURE	700,000	6.39	7,000	11.80%	
108	INTERIOR FINISHINGS & FITTINGS	1,300,000	11.87	13,000	21.91%	
109	MECHANICAL/ELECTRICAL/PLUMBING	1,000,000	9.13	10,000	16.86%	
110	OTHER MISCELLANEOUS	50,000	0.46	500	0.84%	
111	CONTINGENCY @ 5%	282,500	2.58	2,825	4.76%	
112		-----	-----	-----	-----	
113						
114	TOTAL RESIDENTIAL CONSTRUCTION COSTS	\$5,932,500	\$54.18	\$59,325	100.00%	
115		=====	=====	=====	=====	
116						
117	*****					

140																28-Jul-88	
141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:																
142																	
143																	
144	REVENUE GROWTH FACTOR: MARKET UNITS	6.0%															
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS	5.0%															
146	EXPENSE GROWTH FACTOR	5.0%															
147																	
148																	
149																	
150																	
151	POTENTIAL REVENUES:																
152	LOW INCOME UNITS	9186,000	9195,300	9205,065	9215,318	9226,084	9237,300	9249,258	9261,721	9274,807	9288,547	9302,974	9318,123	9334,029	9350,731	9368,267	
153	MARKET UNITS	1,080,000	1,144,800	1,213,488	1,286,297	1,363,475	1,445,284	1,532,001	1,623,921	1,721,356	1,824,637	1,934,116	2,050,162	2,173,172	2,303,563	2,441,776	
154																	
155	TOTAL POTENTIAL REVENUES	1,266,000	1,340,100	1,418,553	1,501,616	1,589,559	1,687,672	1,781,258	1,885,641	1,996,163	2,113,184	2,237,090	2,368,286	2,507,201	2,654,293	2,810,044	
156																	
157	LESS VACANCY & SZ	63,300	67,005	70,920	75,081	79,478	84,134	89,063	94,282	99,808	105,659	111,854	118,414	125,360	132,715	140,502	
158	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,938	16,895	17,908	18,983	20,122	21,329	22,609	
159																	
160	EFFECTIVE GROSS INCOME	1,212,700	1,283,695	1,358,861	1,438,445	1,522,706	1,611,921	1,706,381	1,806,396	1,912,293	2,024,420	2,143,144	2,268,854	2,401,963	2,542,908	2,692,150	
161																	
162	LESS OPERATING EXPENSES	372,500	391,125	410,681	431,215	452,776	475,415	499,186	524,145	550,352	577,870	606,763	637,101	668,956	702,404	737,525	
163	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,825	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386	51,855	54,448	
164																	
165	NET OPERATING INCOME	812,700	863,695	917,861	975,395	1,036,504	1,101,408	1,170,342	1,243,555	1,321,311	1,403,889	1,491,586	1,584,719	1,683,621	1,788,648	1,900,178	
166																	
167	LESS DEBT SERVICE:																
168	INTEREST	862,470	857,227	851,459	845,115	838,136	830,460	822,016	812,727	802,510	791,271	778,907	765,308	750,349	733,893	715,792	
169	PRINCIPAL	52,432	57,675	63,442	69,787	76,765	84,442	92,886	102,175	112,392	123,631	135,994	149,594	164,553	181,008	199,109	
170																	
171	CASH FLOW (DEFICIT) FROM OPERATIONS	(4102,202)	(451,207)	92,960	460,493	912,162	918,506	925,441	932,854	940,609	948,987	957,684	966,817	976,719	987,347	998,576	
172	FUNDING REQUIRED FOR DEBT COVERAGE (1.1 YR)	193,692	51,207	0	0	0	0	0	0	0	0	0	0	0	0	0	
173																	
174	SOURCES OF FUNDING:																
175	MAXIMUM SHARP OUTLAY (PER MHFA)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
176	SHARP FUNDS ADVANCED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
177	REQUIRED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
178	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	0	2,360	60,493	121,602	186,506	255,441	328,654	406,409	489,387	576,584	669,817	768,719	873,747	985,276	
179	PERMITTED CASH DISTRIBUTIONS TO DEV.	0	0	92,960	460,493	912,162	918,506	925,441	932,854	940,609	948,987	957,684	966,817	976,719	987,347	998,576	
180																	
181	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	0.89	0.94	1.00	1.07	1.13	1.20	1.28	1.36	1.44	1.53	1.63	1.73	1.84	1.96	2.08	
182																	
183																	
184																	
185																	
186																	
187																	
188																	
189																	
190	ANALYSIS OF SHARP FUNDING & REPAYMENT:																28-Jul-88
191																	
192																	
193																	
194																	
195	SHARP FUNDS ADVANCED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
196	INTEREST @ 5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
197	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
198	OUTSTANDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
199	ANNUAL NON-DISTRIBUTED PROJECT CASH FLOW	0	0	0	0	0	0	0	41,164	118,919	201,497	289,194	382,327	481,229	586,257	697,786	
200	CUMULATIVE NON-DISTRIBUTED CASH FLOW	0	0	0	0	0	0	0	41,164	160,083	361,580	650,774	1,033,101	1,514,330	2,100,587	2,798,373	
201																	
202																	



254																
255																
256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):															28-Jul-88
257																
258																
259																
260	EFFECTIVE TAX RATE	20.00%	1-CONSTRUCTION-1			INVESTMENT YEARS					INVESTMENT YEARS					
261																
262		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
263		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
264		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
265																
266	NET OPERATING INCOME	\$0	\$0	\$0	\$812,700	\$863,695	\$917,861	\$975,395	\$1,036,504	\$1,101,400	\$1,170,342	\$1,243,555	\$1,321,311	\$1,403,889	\$1,491,586	\$1,584,719
267																
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,825	33,426	35,090	36,853	38,695	40,630	42,662	44,795	47,034
269	LESS MORTGAGE INTEREST & FEES	0	0	0	862,470	857,227	851,459	845,115	838,136	830,460	822,016	812,727	802,510	791,271	778,907	765,300
270	LESS DEPRECIATION	0	0	0	290,609	290,609	290,609	290,609	290,609	290,609	290,609	290,609	290,609	290,609	290,609	290,609
271	LESS AMORTIZATION: MWFA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272																
273	TAXABLE INCOME	0	0	0	(326,506)	(268,893)	(207,516)	(142,122)	(72,443)	1,809	80,943	165,287	255,195	351,043	453,237	562,209
274	TAX BENEFIT (LIABILITY)	0	0	0	91,422	75,290	58,104	39,794	20,284	(507)	(22,664)	(46,280)	(71,455)	(98,292)	(126,906)	(157,418)
275																
276	INVESTMENT TAX CREDITS	0	0	0	151,861	151,861	151,861	151,861	151,861	151,861	151,861	151,861	151,861	151,861	0	0
277																
278																
279	TOTAL TAX BENEFITS (LIABILITY)	\$0	\$0	\$0	\$243,282	\$227,151	\$209,966	\$191,655	\$172,145	\$151,355	\$129,197	\$105,581	\$80,407	\$53,569	\$(126,906)	\$(157,418)
280		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
281																
282																
283																
284																
285	PROFORMA ANALYSIS OF AFTER TAX CASH FLOWS:															28-Jul-88
286																
287																
288																
289																
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	1-CONSTRUCTION-1			INVESTMENT YEARS					INVESTMENT YEARS					
291																
292		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
293		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
294		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
295																
296	CASH INVESTMENT	\$(1,600,000)	\$0	\$641,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	(102,202)	(51,207)	2,960	60,492	121,602	186,506	255,441	328,654	406,409	488,987	0	0
298	TAX BENEFIT (LIABILITY)	0	0	0	243,283	227,151	209,966	191,655	172,145	151,355	129,197	105,581	80,407	53,569	0	0
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	5,522,648	0	0
300																
301																
302	TOTAL AFTER-TAX CASH FLOWS	\$(1,600,000)	\$0	\$641,700	\$141,081	\$175,945	\$212,925	\$252,149	\$293,747	\$337,861	\$384,638	\$434,235	\$486,816	\$546,520	\$0	\$0
303																
304	AFTER-TAX NET PRESENT VALUE	\$558,000														
305	AFTER TAX INTERNAL RATE OF RETURN	22.2%														
306		----														
307																
308																

309	*****			
310				
311	ANALYSIS OF NET SALES PROCEEDS:		28-Jul-88	
312	=====			
313				
314				
315				
316				
317	GROSS SALES PRICE*		\$15,598,762	
318				
319	LESS COMMISSION @ 3%		467,963	
320	LESS MHFA "APPRECIATION PARTICIPATION" @	0.00%	0	
321			-----	
322	NET SALES PRICE		15,130,799	
323				
324	LESS ADJUSTED BASIS:			
325	COST BASIS		9,980,568	
326	PLUS: APPLICATION OF RESERVE		345,892	
327	LESS: DEPRECIATION		2,986,094	
328	LESS: COST AMORTIZATION		56,270	
329			-----	
330			7,284,096	
331			-----	
332	TAXABLE GAIN ON SALE		7,846,703	
333				
334	TAX LIABILITY		\$2,197,077	
335			=====	
336				
337				
338	-----			
339				
340				
341	GROSS SALES PRICE*		\$15,598,762	
342				
343	LESS COMMISSION @ 3%		467,963	
344	LESS MHFA "APPRECIATION PARTICIPATION" @	0.00%	0	
345			-----	
346	NET SALES PRICE		15,130,799	
347				
348	LESS TAX LIABILITY		2,197,077	
349	LESS OUTSTANDING DEBT:			
350	FIRST MORTGAGE LOAN		7,789,074	
351	SHARP LOAN		0	
352	PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)		378,000	
353			-----	
354				
355	NET SALES PROCEEDS		\$5,522,648	
356			=====	
357	* NET OPERATING INCOME CAPITALIZED @ 9.0%			
358				
359	*****			





```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:                28-Jul-88
404 *****
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T              $0
409
410 PROFORMA TIME DELAY (IN MONTHS)                0
411
412 AFTER-TAX NET PRESENT VALUE ("AT $558,000
413
414
415           TIME-
416 MONTHS OF   DELAYED   BASELINE   PRESENT
417 TIME DELAY  "ATNPV"   "ATNPV"   VALUE OF
418 -----
419
420           0  $558,000      $0  $558,000
421           1   529,000      0   529,000
422           2   501,000      0   501,000
423           3   473,000      0   473,000
424           4   445,000      0   445,000
425           5   418,000      0   418,000
426           6   391,000      0   391,000
427           7   364,000      0   364,000
428           8   338,000      0   338,000
429           9   312,000      0   312,000
430          10   287,000      0   287,000
431          11   261,000      0   261,000
432          12   237,000      0   237,000
433          13   212,000      0   212,000
434          14   188,000      0   188,000
435          15   164,000      0   164,000
436          16   140,000      0   140,000
437          17   117,000      0   117,000
438          18    94,000      0    94,000
439          19    72,000      0    72,000
440          20    49,000      0    49,000
441          21    27,000      0    27,000
442          22     6,000      0     6,000
443          23   (16,000)      0   (16,000)
444          24  (37,000)      0  (37,000)
445
446 *****

```

```

447 *****
448
449 SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS
450 =====
451
452                                UNIT LAND COSTS
453                                28-Jul-88
454                                $0      $4,000   $8,000   $12,000   $16,000   $20,000   $24,000
455                                0.00%  210,000  (54,000) (318,000) (582,000) (846,000) (1,110,000) (1,374,000)
456                                1.00%  400,000  136,000  (128,000) (392,000) (656,000) (920,000) (1,184,000)
457                                2.00%  603,000  339,000   75,000  (189,000) (453,000) (717,000) (981,000)
458                                3.00%  820,000  556,000  292,000   28,000 (236,000) (500,000) (764,000)
459                                4.00% 1,092,000  803,000  526,000  259,000   (5,000) (269,000) (533,000)
460                                5.00% 1,409,000 1,107,000  814,000  528,000  249,000  (22,000) (287,000)
461                                6.00% 1,756,000 1,447,000 1,144,000  848,000  558,000  272,000   (7,000)
462                                7.00% 2,130,000 1,817,000 1,508,000 1,204,000  906,000  611,000  323,000
463                                8.00% 2,533,000 2,213,000 1,901,000 1,592,000 1,288,000  987,000  692,000
464                                9.00% 2,960,000 2,640,000 2,323,000 2,011,000 1,701,000 1,397,000 1,094,000
465                                10.00% 3,416,000 3,094,000 2,774,000 2,459,000 2,147,000 1,836,000 1,533,000
466 *****

```

467	*****		
468			
469	SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING		
470	=====		
471		UNITS/	AFTER-TAX
472		ACRE	NPV
473		-----	-----
474			
475		2.00	(9673,000)
476		2.25	(575,000)
477		2.50	(484,000)
478		2.75	(383,000)
479		3.00	(281,000)
480		3.25	(178,000)
481		3.50	(81,000)
482		3.75	32,000
483		4.00	128,000
484		4.25	241,000
485		4.50	347,000
486		4.75	466,000
487		5.00	558,000
488		5.25	677,000
489		5.50	788,000
490		5.75	912,000
491		6.00	1,000,000
492		6.25	1,124,000
493		6.50	1,237,000
494		6.75	1,363,000
495		7.00	1,449,000
496		7.25	1,577,000
497		7.50	1,692,000
498		7.75	1,821,000
499		8.00	1,905,000
500		8.25	2,033,000
501		8.50	2,149,000
502		8.75	2,279,000
503		9.00	2,361,000
504		9.25	2,492,000
505		9.50	2,610,000
506		9.75	2,742,000
507		10.00	2,823,000
508			
509	*****		

## Appendix H

```
1 *****
2
3 AFFORDABLE HOUSING ANALYSIS                28-Jul-88
4 (1) MARKET DEAL
5 DAVID CARTER
6
7 *****
```

```

119 *****
120 OPERATING ASSUMPTIONS:                                SHARP SUBSIDY/RESTRICTION ASSUMPTIONS:      28-Jul-88
121 =====                                                =====
122 OPERATING EXPENSES PER UNIT          $4,000      SHARP FUNDING (YES OR NO)                      NO
123 LAUNDRY INCOME (NET) PER UNIT        $100      LIMITED DIVIDEND DISTRIBUTION                  NO
124 RESERVE FOR REPLACEMENT PER UNIT PER YEAR  $275      (YES OR NO)
125 DIVIDEND DISTRIBUTION %                                100.00%
126 FINANCING ASSUMPTIONS:
127 =====
128 MINIMUM DEVELOPER EQUITY CONTRIBUTION    10.00%      LAND COST                                $1,600,000
129 (AS A % OF TOTAL DEVELOPMENT COST)      UNIT LAND COST                            $16,000
130 MINIMUM % AFFORDABLE UNITS                                20.00%
131 TAX ASSUMPTIONS:
132 =====
133 TAX CREDIT %                                0.00%      SITE SIZE IN ACRES (NET OF ROADS)          20.0
134 DENSITY (UNITS/ACRE)                                5.0
135 TOTAL UNITS IN DEVELOPMENT (CALC)                    100
136 HOLDING PERIOD AFTER COMPLETION          10.0      UNIT LAND COST/DENSITY TOGGLE                1
137 (0=SOLVE FOR DENSITY, 1=SOLVE FOR DELAY)
138 *****

```

3	*****								
9									
10	DEVELOPMENT PLAN:							28-Jul-88	
11	*****								
12									
13					PROJECTED	PROJECTED			
14				TOTAL	MONTHLY	ANNUAL	PROJECTED		
15		RENTABLE	# OF	RENTABLE	RENT/	RENT/	1ST YEAR		
16	UNITS	SQ.FT.	UNITS	SQ.FT.	UNIT	UNIT	RENT ROLL		
17	----	-----	-----	-----	-----	-----	-----		
18									
19	TWO BEDROOM, LOW INCOME (A)	1,000	5	5,000	\$650	\$7,800	\$39,000		
20	TWO BEDROOM, LOW INCOME (B)	1,100	5	5,500	650	7,800	39,000		
21	TWO BEDROOM, MARKET (A)	1,000	30	30,000	1,000	12,000	360,000		
22	TWO BEDROOM, MARKET (B)	1,100	30	33,000	1,200	14,400	432,000		
23	THREE BEDROOM, LOW INCOME (A)	1,100	5	5,500	900	10,800	54,000		
24	THREE BEDROOM, LOW INCOME (B)	1,300	5	6,500	900	10,800	54,000		
25	THREE BEDROOM, MARKET (A)	1,100	10	11,000	1,150	13,800	138,000		
26	THREE BEDROOM, MARKET (B)	1,300	10	13,000	1,250	15,000	150,000		
27			----	-----			-----		
28	TOTALS		100	109,500			\$1,266,000		
29									
30									
31	"AVERAGE" LOW INCOME UNIT	1,125	20	22,500	775	9,300	186,000		
32	"AVERAGE" MARKET UNIT	1,288	80	87,000	1,125	13,500	1,080,000		
33			----	-----			-----		
34			100	109,500			\$1,266,000		
35									
36	*****								

37	*****					
38						
39	DEVELOPMENT COST ASSUMPTIONS:					28-Jul-88
40	*****					
41						
42						
43		LINE	COST/		% OF	
44		ITEM	RENTABLE	COST/	TOTAL	
45		COSTS	SQ.FT.	UNIT	COSTS	
46		-----	-----	-----	-----	
47						
48	LAND ACQUISITION	\$1,600,000	\$14.61	\$16,000	13.83%	
49						
50						
51	"HARD COSTS":					
52						
53	RESIDENTIAL CONSTRUCTION COSTS	5,932,500	54.18	59,325	51.27%	
54	LAND DEVELOPMENT (SITE, SEWER, ETC.)	500,000	4.57	5,000	4.32%	
55		-----	-----	-----	-----	
56	TOTAL HARD COSTS	6,432,500	58.74	64,325	55.59%	
57						
58						
59	"SOFT" COSTS:					
60						
61	ARCHITECTURAL & ENGINEERING	177,975	1.63	1,780	1.54%	
62	BOND PREMIUM (.004%)	25,730	0.23	257	0.22%	
63	PERMITS AND SURVEYS	150,000	1.37	1,500	1.30%	
64	CONSTRUCTION LOAN INTEREST	633,863	5.79	6,339	5.48%	
65	DAS APPLICATION FEE	0	0.00	0	0.00%	
66	MORTGAGE APPLICATION FEE	16,421	0.15	164	0.14%	
67	INSPECTION FEE	41,053	0.37	411	0.35%	
68	LOAN POINTS	168,809	1.54	1,688	1.46%	
69	REAL ESTATE TAXES	25,000	0.23	250	0.22%	
70	INSURANCE	100,000	0.91	1,000	0.86%	
71	LEGAL FEES	100,000	0.91	1,000	0.86%	
72	TITLE & RECORDING EXPENSES	15,000	0.14	150	0.13%	
73	ACCOUNTING & COST CERTIFICATION	15,000	0.14	150	0.13%	
74	RENT-UP AND MARKETING	50,000	0.46	500	0.43%	
75	DEVELOPER'S FEE	1,590,270	14.52	15,903	13.74%	
76	DEVELOPER'S OVERHEAD	397,568	3.63	3,976	3.44%	
77	SOFT COST CONTINGENCY (5%)	31,649	0.29	316	0.27%	
78		-----	-----	-----	-----	
79	TOTAL SOFT COSTS	3,538,338	32.31	35,383	30.58%	
80						
81						
82	TOTAL DEVELOPMENT COSTS (MHFA)	\$11,570,838	\$105.67	\$115,708	100.00%	
83		=====	=====	=====	=====	
84	TOTAL CASH DEVELOPMENT COSTS	\$9,583,000				
85		=====				
86						
87	*****					





140																28 Jul-88
141	PROFORMA ANALYSIS OF CASH FLOW (DEFICIT) FROM OPERATIONS:															
142																
143																
144	REVENUE GROWTH FACTOR: MARKET UNITS	6.0%														
145	REVENUE GROWTH FACTOR: SUBSIDIZED UNITS	5.0%														
146	EXPENSE GROWTH FACTOR	5.0%														
147																
148	OPERATING YEARS															
149	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
150	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
151	POTENTIAL REVENUES:															
152	LOW INCOME UNITS	8186,000	8195,300	8205,065	8215,318	8226,084	8237,380	8249,258	8261,721	8274,807	8288,547	8302,974	8318,123	8334,029	8350,731	8368,267
153	MARKET UNITS	1,000,000	1,144,800	1,213,488	1,286,297	1,363,475	1,445,284	1,532,001	1,623,921	1,721,356	1,824,637	1,934,116	2,050,162	2,173,172	2,303,563	2,441,776
154																
155	TOTAL POTENTIAL REVENUES	1,266,000	1,340,100	1,418,553	1,501,616	1,589,559	1,682,672	1,781,258	1,885,641	1,991,163	2,112,184	2,237,090	2,368,286	2,507,201	2,654,293	2,810,044
156	LESS VACANCY & SE	63,300	67,005	70,920	75,001	79,478	84,134	89,063	94,282	99,808	105,659	111,854	118,414	125,360	132,715	140,502
157	PLUS INCOME FROM LAUNDRY (NET)	10,000	10,600	11,236	11,910	12,625	13,382	14,185	15,036	15,938	16,895	17,908	18,983	20,122	21,329	22,609
158	EFFECTIVE GROSS INCOME	1,212,700	1,283,695	1,358,861	1,438,445	1,522,706	1,611,921	1,706,381	1,806,396	1,912,293	2,024,420	2,143,144	2,268,854	2,401,963	2,542,908	2,692,150
159	LESS OPERATING EXPENSES	372,500	391,125	410,681	431,215	452,776	475,415	499,186	524,145	550,352	577,870	606,763	637,101	668,956	702,484	737,525
160	LESS REPLACEMENT RESERVE	27,500	28,875	30,319	31,825	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386	51,855	54,448
161	NET OPERATING INCOME	812,700	863,695	917,861	975,395	1,036,504	1,101,408	1,170,342	1,243,555	1,321,311	1,403,889	1,491,586	1,584,719	1,683,621	1,788,648	1,900,178
162	LESS DEBT SERVICE:															
163	INTEREST	862,470	857,227	851,459	845,115	838,136	830,460	822,016	812,727	802,510	791,271	778,907	765,308	750,349	733,893	715,792
164	PRINCIPAL	52,432	57,675	63,442	69,787	76,765	84,442	92,886	102,175	112,392	123,631	135,994	149,594	164,553	181,008	199,109
165	CASH FLOW (DEFICIT) FROM OPERATIONS	(8102,202)	(851,207)	82,960	860,493	8121,602	8186,506	8255,441	8328,654	8406,409	8488,987	8576,684	8669,817	8768,719	8873,747	8985,276
166	FUNDING REQUIRED FOR DEBT COVERAGE (1.1 YR)	193,692	51,207	0	0	0	0	0	0	0	0	0	0	0	0	0
167	SOURCES OF FUNDING:															
168	MAXIMUM SHARP OUTLAY (PER MHFA)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
169	SHARP FUNDS ADVANCED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	PERMITTED DEVELOPER CONTRIBUTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	CASH AVAILABLE FOR DISTRIBUTION TO DEV.	0	0	2,960	60,493	121,602	186,506	255,441	328,654	406,409	488,987	576,684	669,817	768,719	873,747	985,276
172	PERMITTED CASH DISTRIBUTIONS TO DEV.	90	90	82,960	860,493	8121,602	8186,506	8255,441	8328,654	8406,409	8488,987	8576,684	8669,817	8768,719	8873,747	8985,276
173																
174	DEBT SERVICE COVERAGE (WITH FUNDING, IF ANY)	0.89	0.94	1.00	1.07	1.13	1.20	1.28	1.36	1.44	1.53	1.63	1.73	1.84	1.96	2.08
175																
176	ANALYSIS OF SHARP FUNDING & REPAYMENT:															
177																
178	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
179	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
180	SHARP FUNDS ADVANCED	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
181	INTEREST @ SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
182	PAYMENTS FROM OPERATIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	OUTSTANDING BALANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
184	ANNUAL NON-DISTRIBUTED PROJECT CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
185	CUMULATIVE NON-DISTRIBUTED CASH FLOW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
186																



254																	
255																	
256	PROFORMA ANALYSIS OF TAX BENEFITS (LIABILITIES):																
257	28-Jul-88																
258																	
259																	
260	EFFECTIVE TAX RATE	28.00%	1-CONSTRUCTION:			INVESTMENT YEARS					INVESTMENT YEARS						
261		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	
262		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
263		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
264		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
265		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
266	NET OPERATING INCOME	90	90	90	9812,700	9863,695	9917,061	9975,395	91,036,504	91,101,408	91,170,342	91,243,555	91,321,311	91,403,889	91,491,586	91,584,719	91,683,621
267		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
268	PLUS REPLACEMENT RESERVE	0	0	0	27,500	28,875	30,319	31,835	33,426	35,098	36,853	38,695	40,630	42,662	44,795	47,034	49,386
269	LESS MORTGAGE INTEREST & FEES	0	0	0	862,470	857,227	851,459	845,115	838,136	830,460	822,016	812,727	802,510	791,271	778,907	765,308	750,349
270	LESS DEPRECIATION	0	0	0	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609	298,609
271	LESS AMORTIZATION: RMFA FINANCING FEE	0	0	0	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627	5,627
272		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
273	TAXABLE INCOME	0	0	0	(326,506)	(268,893)	(207,516)	(142,122)	(72,443)	1,809	80,943	165,287	255,195	351,043	453,237	562,209	678,422
274	TAX BENEFIT (LIABILITY)	0	0	0	91,422	75,290	58,104	39,794	20,284	(507)	(22,664)	(46,280)	(71,455)	(98,292)	(126,906)	(157,418)	(189,958)
275		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
276	INVESTMENT TAX CREDITS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
277		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
278		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
279	TOTAL TAX BENEFITS (LIABILITY)	90	90	90	91,422	75,290	58,104	39,794	20,284	(507)	(22,664)	(46,280)	(71,455)	(98,292)	(126,906)	(157,418)	(189,958)
280		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
281																	
282																	
283																	
284																	
285	PROFORMA ANALYSIS OF AFTER TAX CASH FLOWS:																
286	28-Jul-88																
287																	
288																	
289																	
290	REQUIRED RATE OF RETURN ON EQUITY INVESTMENT	17.5%	1-CONSTRUCTION:			INVESTMENT YEARS					INVESTMENT YEARS						
291		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
292		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
293		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
294		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
295		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
296	CASH INVESTMENT	(91,600,000)	90	9641,700	90	90	90	90	90	90	90	90	90	90	90	90	90
297	CASH DISTRIBUTION (DEFICIT) FROM OPERATIONS	0	0	0	(102,202)	(51,207)	2,960	60,493	121,602	186,506	255,441	328,154	406,409	488,987	0	0	0
298	TAX BENEFIT (LIABILITY)	0	0	0	91,422	75,290	58,104	39,794	20,284	(507)	(22,664)	(46,280)	(71,455)	(98,292)	0	0	0
299	NET SALES PROCEEDS	0	0	0	0	0	0	0	0	0	0	0	0	5,144,649	0	0	0
300		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
301		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
302	TOTAL AFTER TAX CASH FLOWS	(91,600,000)	90	9641,700	(10,780)	24,083	61,064	100,287	141,886	186,000	232,777	282,373	334,955	45,535,343	90	90	90
303		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
304	AFTER-TAX NET PRESENT VALUE	90															
305	AFTER TAX INTERNAL RATE OF RETURN	17.5%															
306		---															
307																	
308																	

```

309 *****
310
311 ANALYSIS OF NET SALES PROCEEDS:                28-Jul-88
312 =====
313
314
315
316
317 GROSS SALES PRICE*                               $15,598,762
318
319 LESS COMMISSION @ 3%                             467,963
320 LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%  0
321 -----
322 NET SALES PRICE                                   15,130,799
323
324 LESS ADJUSTED BASIS:
325 COST BASIS                                         9,980,568
326 PLUS: APPLICATION OF RESERVE                     345,892
327 LESS: DEPRECIATION                               2,986,094
328 LESS: COST AMORTIZATION                           56,270
329 -----
330                                           7,284,096
331 -----
332 TAXABLE GAIN ON SALE                             7,846,703
333
334 TAX LIABILITY                                     $2,197,077
335 =====
336
337
338 -----
339
340
341 GROSS SALES PRICE*                               $15,598,762
342
343 LESS COMMISSION @ 3%                             467,963
344 LESS MHFA "APPRECIATION PARTICIPATION" @ 0.00%  0
345 -----
346 NET SALES PRICE                                   15,130,799
347
348 LESS TAX LIABILITY                               2,197,077
349 LESS OUTSTANDING DEBT:
350 FIRST MORTGAGE LOAN                             7,789,074
351 SHARP LOAN                                         0
352 PLUS NON-DISTRIBUTED PROJECT CASH FLOW RESERVE (WITH INTEREST)  0
353 -----
354
355 NET SALES PROCEEDS                               $5,144,649
356 =====
357 * NET OPERATING INCOME CAPITALIZED @ 9.0%
358
359 *****

```

360																
361																
362	PROFORMA STATEMENT OF SOURCES AND USES OF CASH:															28-Jul-88
363																
364																
365																
366																
367																
368		TIME	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR	YEAR
369		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
370	SOURCES OF CASH:															
371																
372	DEVELOPER EQUITY (CASH)	\$1,600,000	\$0	\$0	\$182,202	\$51,207	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
373	MWA MORTGAGE FINANCING	0	4,312,350	4,312,350	0	0	0	0	0	0	0	0	0	0	0	0
374	SHAPP FUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
375	NET OPERATING INCOME	0	0	0	812,700	863,695	917,861	975,395	1,036,504	1,101,408	1,170,342	1,243,555	1,321,311	1,403,889	0	0
376	INTEREST ON NON-DISTRIBUTED CASH FLOW RES.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377	NET SALES PRICE	0	0	0	0	0	0	0	0	0	0	0	0	15,130,799	0	0
378	DISTRIBUTION OF CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
379																
380																
381	TOTAL SOURCES OF CASH	\$1,600,000	\$4,312,350	\$4,312,350	\$914,902	\$914,902	\$917,861	\$975,395	\$1,036,504	\$1,101,408	\$1,170,342	\$1,243,555	\$1,321,311	\$16,534,688	\$0	\$0
382																
383																
384	USES OF CASH:															
385																
386	ACQUISITION OF LAND/PREDEVELOPMENT	\$1,600,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
387	DEVELOPMENT OF IMPROVEMENTS/LAND DRAIN	0	4,312,350	4,312,350	0	0	0	0	0	0	0	0	0	0	0	0
388	INTEREST & FEES: MWA MORTGAGE	0	0	0	862,470	857,227	851,459	845,115	838,136	830,460	822,016	812,727	802,510	791,271	0	0
389	AMORTIZATION: MWA MORTGAGE	0	0	0	52,432	57,675	63,442	69,787	76,765	84,442	92,886	102,175	112,392	122,705	0	0
390	MWA REQUIRED BENT SERVICE RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391	REPAYMENT OF SHAPP FUNDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
392	TAX LIABILITY ON SALE	0	0	0	0	0	0	0	0	0	0	0	0	2,197,077	0	0
393	"LIMITED DIVIDEND" DISTRIBUTIONS	0	0	0	0	0	2,960	60,493	121,602	186,506	255,441	328,654	406,409	5,633,635	0	0
394	NON-DISTRIBUTED PROJECT CASH FLOW RESERVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
395																
396																
397	TOTAL USES OF CASH	\$1,600,000	\$4,312,350	\$4,312,350	\$914,902	\$914,902	\$917,861	\$975,395	\$1,036,504	\$1,101,408	\$1,170,342	\$1,243,555	\$1,321,311	\$16,534,688	\$0	\$0
398																
399																
400																

```

401 *****
402
403 BREAKEVEN TIME DELAY ANALYSIS:          28-Jul-88
404 =====
405
406
407
408 BASELINE ("MARKET DEAL") AFTER-T        $0
409
410 PROFORMA TIME DELAY (IN MONTHS)          0
411
412 AFTER-TAX NET PRESENT VALUE ("AT        $0
413
414
415           TIME-
416 MONTHS OF   DELAYED   BASELINE   PRESENT
417 TIME DELAY  "ATNPV"   "ATNPV"   VALUE OF
418 -----
419
420           0           $0           $0           $0
421           1   (21,000)           0   (21,000)
422           2   (42,000)           0   (42,000)
423           3   (63,000)           0   (63,000)
424           4   (84,000)           0   (84,000)
425           5  (104,000)           0  (104,000)
426           6  (124,000)           0  (124,000)
427           7  (144,000)           0  (144,000)
428           8  (163,000)           0  (163,000)
429           9  (182,000)           0  (182,000)
430          10  (201,000)           0  (201,000)
431          11  (220,000)           0  (220,000)
432          12  (238,000)           0  (238,000)
433          13  (256,000)           0  (256,000)
434          14  (274,000)           0  (274,000)
435          15  (292,000)           0  (292,000)
436          16  (309,000)           0  (309,000)
437          17  (327,000)           0  (327,000)
438          18  (344,000)           0  (344,000)
439          19  (360,000)           0  (360,000)
440          20  (377,000)           0  (377,000)
441          21  (393,000)           0  (393,000)
442          22  (409,000)           0  (409,000)
443          23  (425,000)           0  (425,000)
444          24  (441,000)           0  (441,000)
445
446 *****

```

```

447 *****
448
449 SENSITIVITY ANALYSIS: EFFECTS ON AFTER-TAX NPV DUE TO CHANGES IN REVENUE GROWTH AND UNIT LAND COST ASSUMPTIONS
450 =====
451
452                                UNIT LAND COSTS
453                                $0      $4,000    $8,000    $12,000    $16,000    $20,000    $24,000
454                                0.0% (293,000) (557,000) (821,000) (1,085,000) (1,349,000) (1,613,000) (1,877,000)
455                                1.0% (103,000) (367,000) (631,000) (895,000) (1,159,000) (1,423,000) (1,687,000)
456                                2.0% 100,000 (164,000) (428,000) (692,000) (956,000) (1,220,000) (1,484,000)
457 ANNUAL REVENUE GROWTH FACTOR 3.0% 317,000 53,000 (211,000) (475,000) (739,000) (1,003,000) (1,267,000)
458                                4.0% 547,000 283,000 19,000 (245,000) (509,000) (773,000) (1,037,000)
459                                5.0% 794,000 530,000 266,000 2,000 (262,000) (526,000) (790,000)
460 (*MARKET* UNITS)              6.0% 1,056,000 792,000 528,000 264,000 0 (264,000) (528,000)
461                                7.0% 1,336,000 1,072,000 808,000 544,000 280,000 16,000 (248,000)
462                                8.0% 1,634,000 1,370,000 1,106,000 842,000 578,000 314,000 50,000
463                                9.0% 1,952,000 1,688,000 1,424,000 1,160,000 896,000 632,000 368,000
464                                10.0% 2,290,000 2,026,000 1,762,000 1,498,000 1,234,000 970,000 706,000
465
466 *****

```

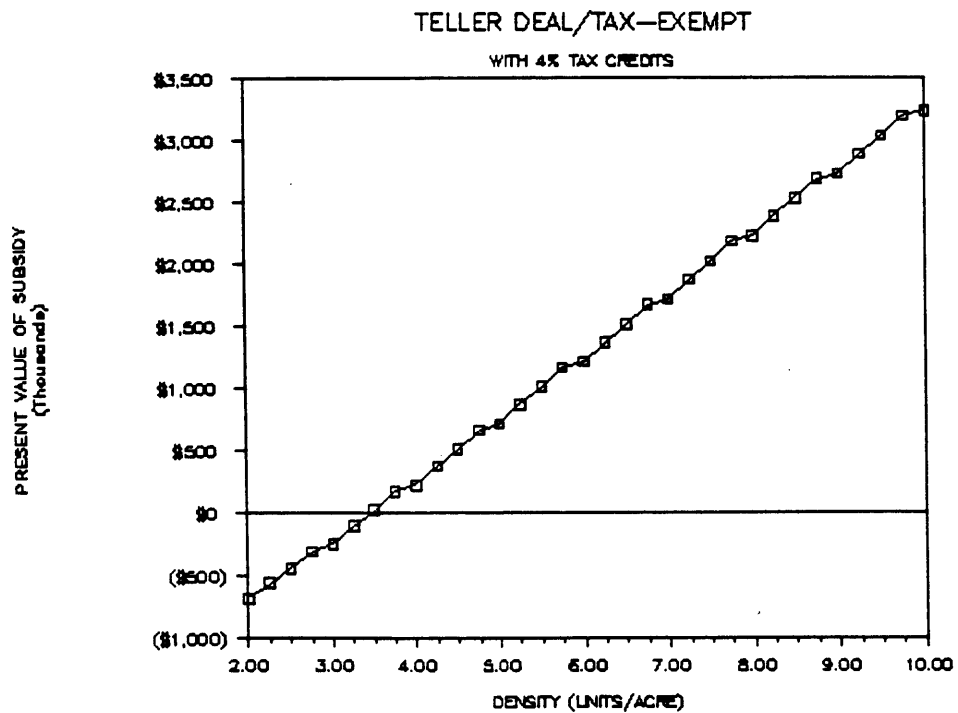
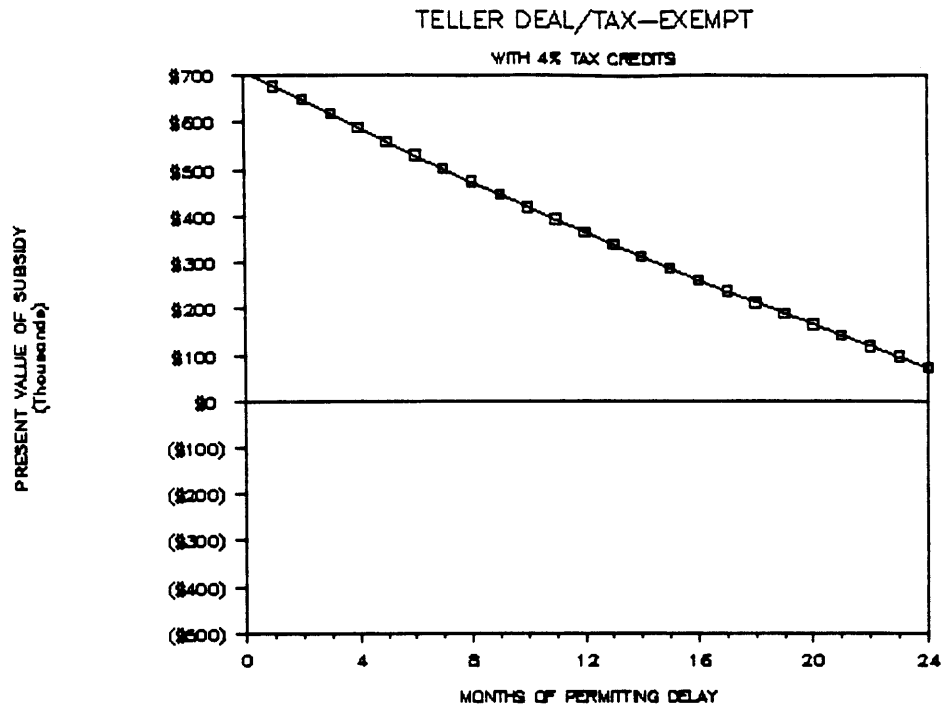


```

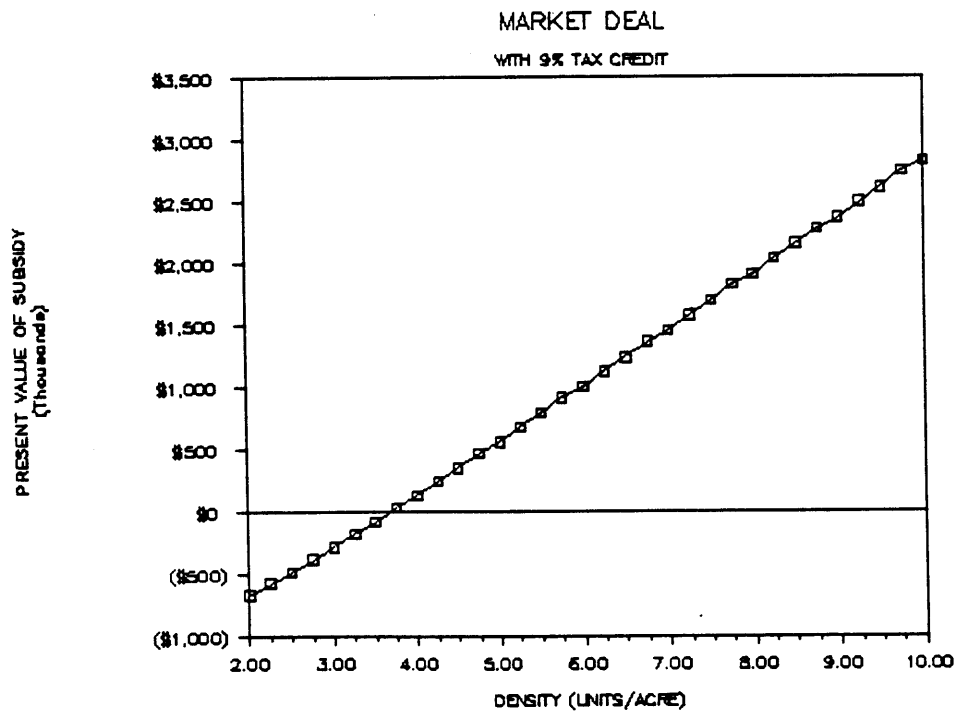
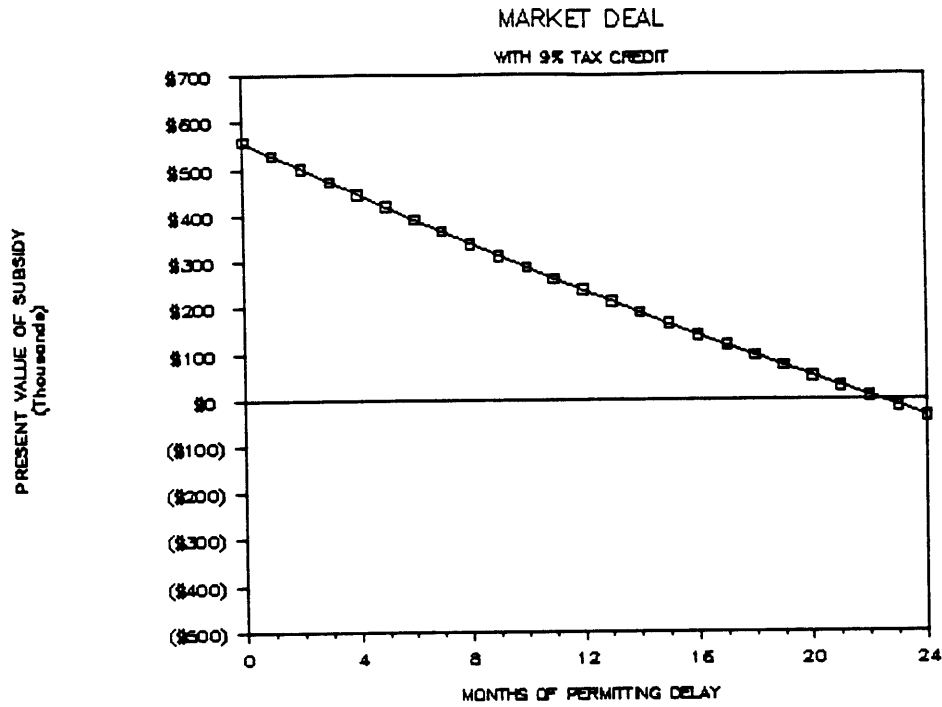
467 *****
468
469 SENSITIVITY ANALYSIS: EFFECT ON AFTER-TAX NET PRESENT VALUE OF CHANGES IN DENSITY (HOLDING
470 =====
471          UNITS/  AFTER-TAX
472          ACRE   NPV
473          -----
474
475          2.00  ($919,000)
476          2.25  (811,000)
477          2.50  (714,000)
478          2.75  (607,000)
479          3.00  (612,000)
480          3.25  (505,000)
481          3.50  (408,000)
482          3.75  (301,000)
483          4.00  (306,000)
484          4.25  (199,000)
485          4.50  (102,000)
486          4.75   (6,000)
487          5.00    0
488          5.25  108,000
489          5.50  204,000
490          5.75  312,000
491          6.00  306,000
492          6.25  414,000
493          6.50  511,000
494          6.75  618,000
495          7.00  513,000
496          7.25  720,000
497          7.50  817,000
498          7.75  924,000
499          8.00  919,000
500          8.25 1,026,000
501          8.50 1,123,000
502          8.75 1,231,000
503          9.00 1,225,000
504          9.25 1,333,000
505          9.50 1,429,000
506          9.75 1,537,000
507          10.00 1,531,000
508
509 *****

```

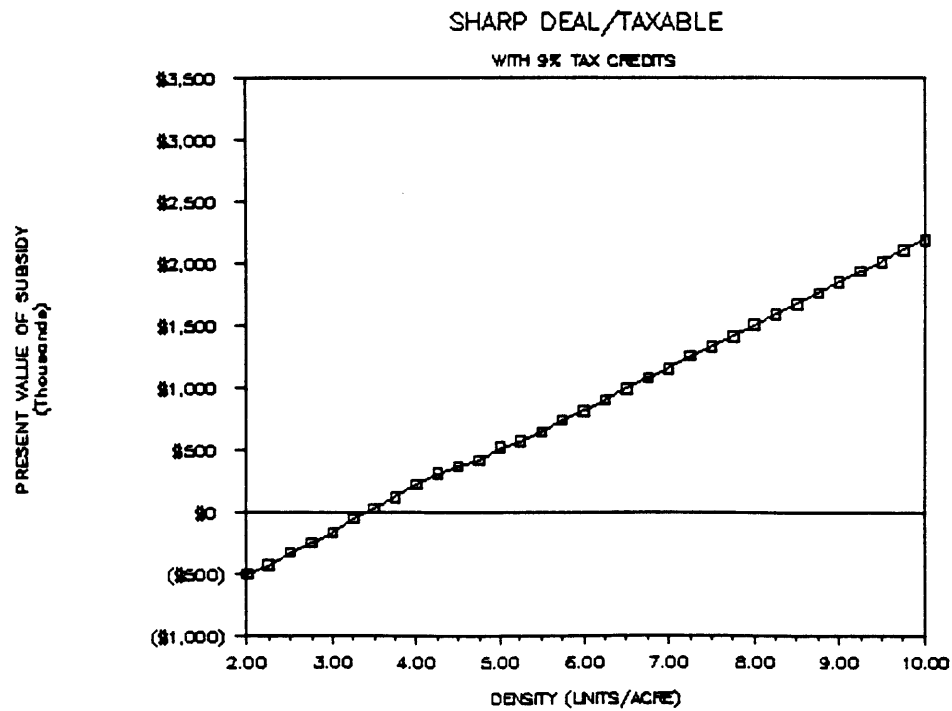
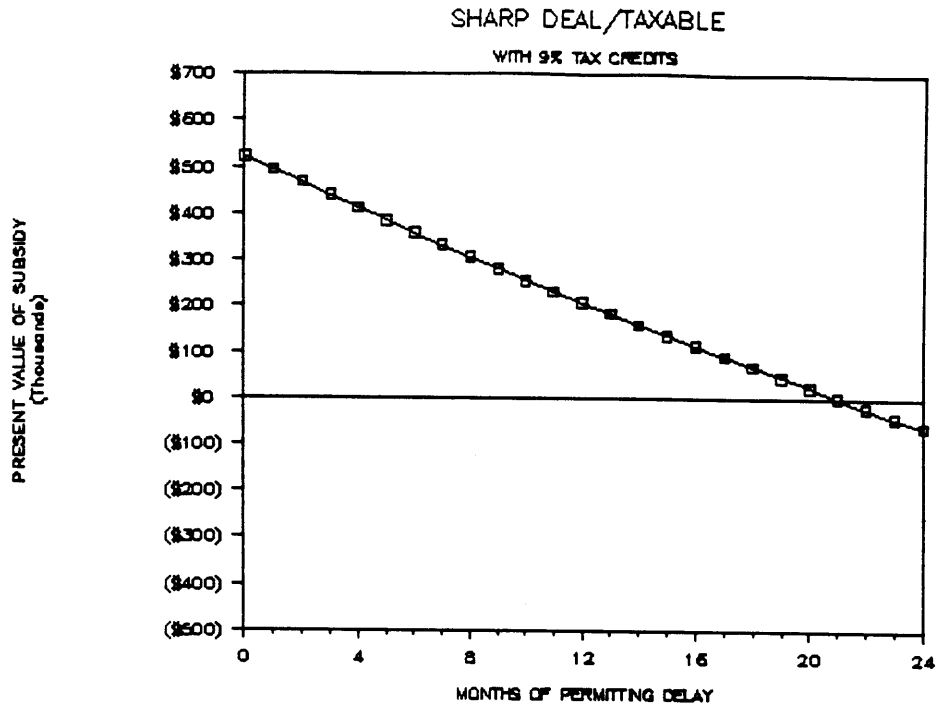
# Appendix I



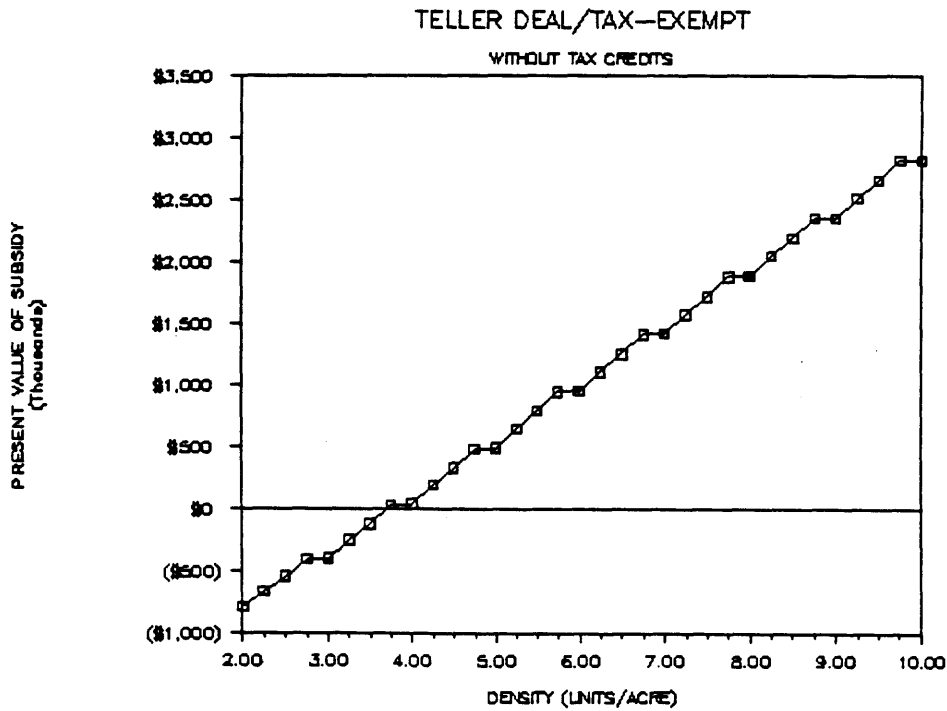
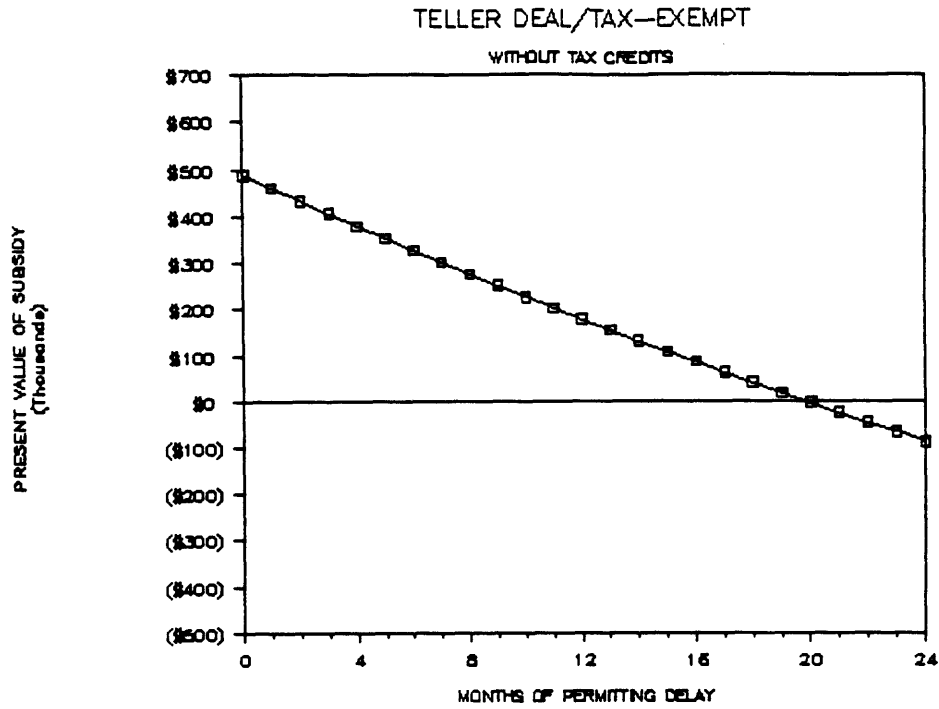
## Appendix J



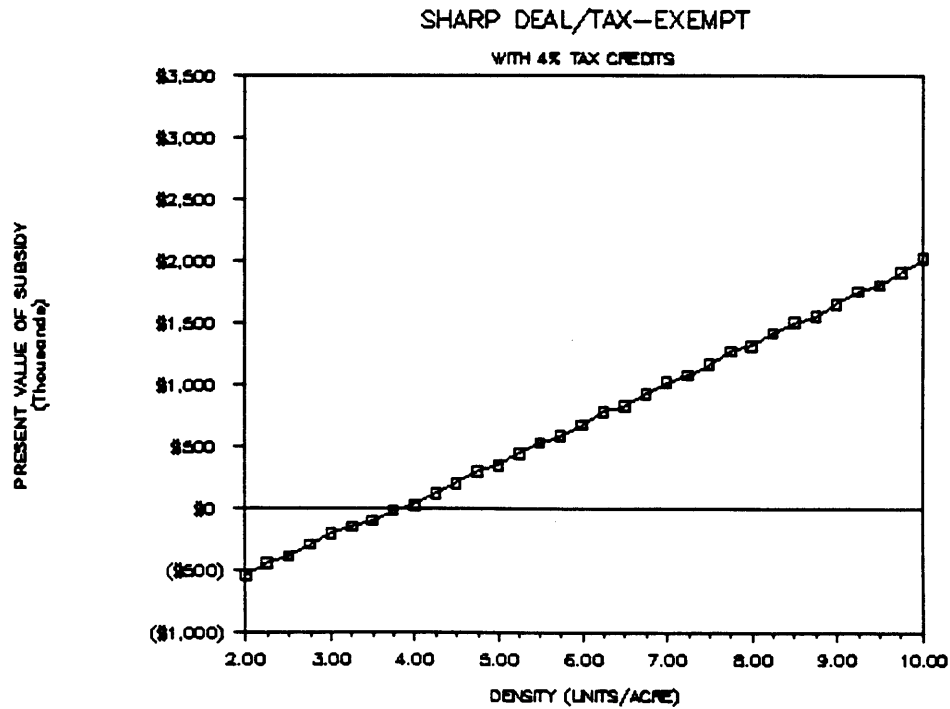
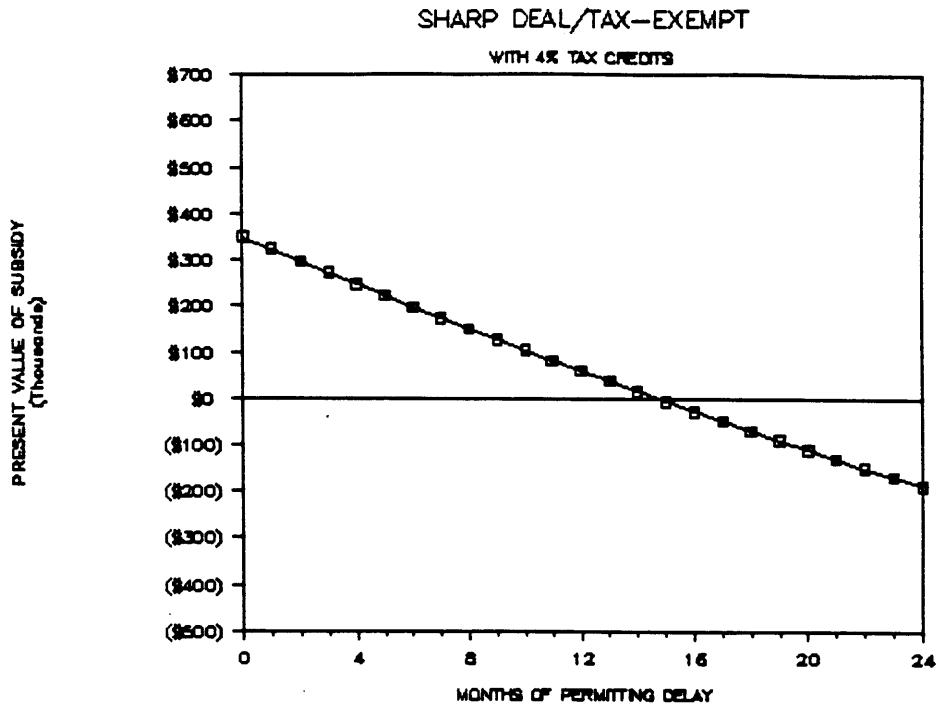
## Appendix K



# Appendix L



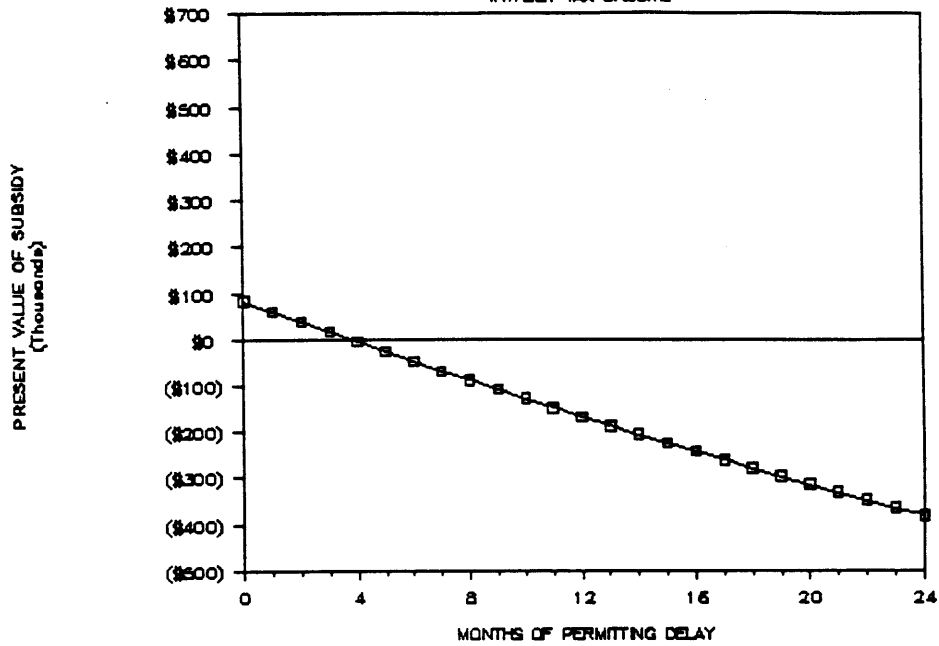
# Appendix M



# Appendix N

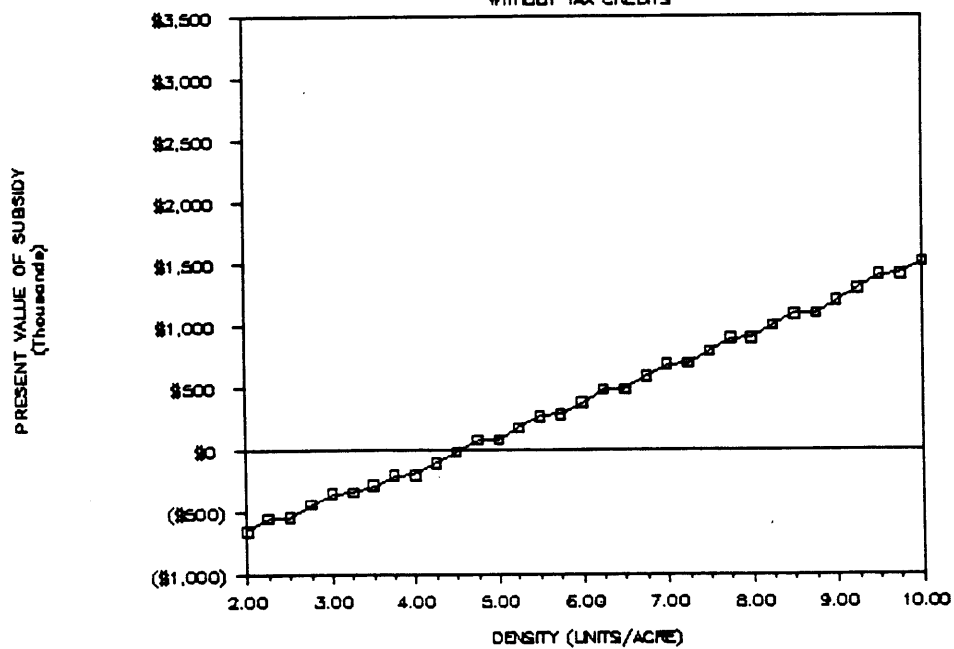
## SHARP DEAL/TAX-EXEMPT

WITHOUT TAX CREDITS

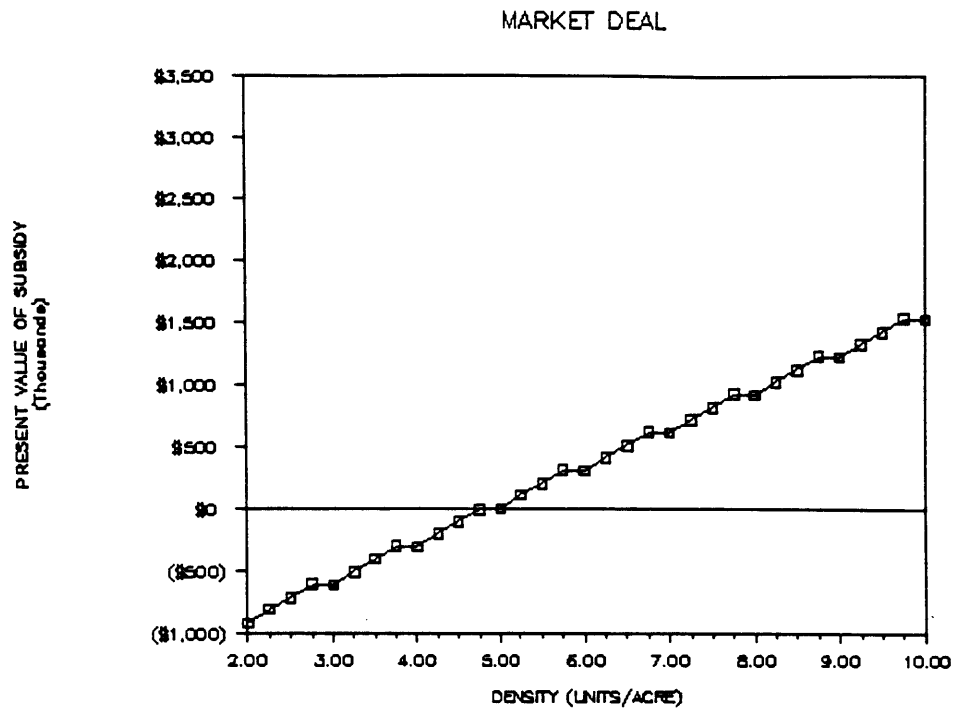


## SHARP DEAL/TAX-EXEMPT

WITHOUT TAX CREDITS



## Appendix O





# Appendix P

